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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interests of Lake Carriers, and improve the character of the service rendered to the public.

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LAKE CARRIERS' ASSOCIATION.

At a meeting of the executive committee of the Lake Carriers' Association on Tuesday, Messrs. B. L. Pennington, Harvey D. Goulder, H. Coulby and Capt. J. J. H. Braun, of Buffalo, were appointed a committee to draft resolutions on the death of Capt. Thomas Wilson. The committee will make a report at a meeting to be held in about two weeks, or shortly before Capt. Wilson's body arrives. W. C. Farrington, of Buffalo, president of the association, William Livingstone, of Detroit, Capt. John G. Keith, of Chicago, and H. A. Hawgood, of this city, were appointed a committee to go to New York to meet the body. All arrangements for the funeral will be made at the next meeting.

No action was taken in regard to wages at Tuesday's meeting. Owing to the late start that is now certain, very few men aside from the engineers have been put to work and the members of the committee decided not to hurry the matter. Most of the owners will be able to attend the next meeting, which will be held the week after next, when a schedule will probably be adopted.

DIVERTING THE WATERS OF THE LAKES.

The maintenance of the level of the Great Lakes is a question that is being forced on the attention of the people of both the United States and Canada, says the Toronto World. There is now before the United States Senate Committee on Foreign Affairs a proposed resolution providing for the appointment of an international commission to examine into and report upon the diversion of the waters of the Great Lakes. Already one scheme is in operation, viz., the Chicago drainage canal, which is depleting Lake Michigan of its waters at the rate of 600,000 cubic feet per minute. Canada is jointly interested with the cities on Lakes Erie and Ontario in maintaining the level of the Great Lakes. The Dominion, we understand, has already filed a protest with the Washington authorities, objecting to the diversion of such a large quantity of water from its natural channel. But the Chicago drainage canal is only the first of several other proposed projects involving the diversion of the waters of the Great Lakes. The New York Sun admits that the Erie canal cannot be enlarged, as proposed, without drawing its water supply from the Great Lakes. Other canal schemes depending upon the Great Lakes for their water are the construction of a waterway from Cleveland to the Ohio river; a canal connecting Lake Superior and Lake Michigan; a ship canal around Niagara Falls, connecting Lakes Erie and Ontario. These are all United States projects. To them must be added the Canadian proposal for the construc-

tion of a big canal from Georgian Bay by way of the Ottawa river to Montreal. If these projects were all carried out, or even one-half of them, very little of the water of the Great Lakes would find its way to the sea by the present natural channel. Our new 14-foot waterway would be put out of business were so great a diversion of water permitted as is contemplated by the various schemes. This question of the level of the Great Lakes is one that may very seriously affect the shipping and commercial interests of this country. The Government should not only agree to the appointment of a joint international committee, but it should take active steps to demand such a committee, or it should appoint one of its own to ascertain the effect that these various projects will have upon Canadian interests.

While there is a tendency to divert the waters of the St. Lawrence system in the ways indicated, there is also a scheme on foot to preserve and regulate the flow of these waters for the improvement of navigation. The Deep Waterways Commission has reported as practicable and desirable the project for maintaining the level of Lake Erie near its high water stage during the season of navigation by constructing a dam across Niagara river below Buffalo harbor. The water lost by evaporation in summer, says the National Geographic Magazine, could be partially replaced by accumulating the surplus water during the closed season and releasing it when most necessary in the open season. The best location for a dam is, according to the board, at the foot of the lake, just below Buffalo harbor. A canal with a lock is provided on the American side around the end of the dam and the rapids at the head of the river. The cost of the regulating works is estimated at \$796,923, and of the lock and canal at \$2,325,967. The changes would raise the low-water stage about three feet in Lake Erie, two feet in Lake St. Clair and one foot in Lake Huron.

CANADIAN STEAMBOAT INSPECTION.

The total number of steamboats reported in the several districts in the dominion is 1,427. Of this number 112 are new vessels, the gross tonnage being 236,257.93. Fees were collected for inspection amounting to \$32,814.45; the fees from engineers for certificates amounted to \$910, and fees for inspection of tow barges to \$130, making the total receipts from steamboat inspection and engineers' certificates \$33,854.45. The receipts for the previous year from these sources amounted to \$31,525.40; it will thus be seen that the receipts of the fiscal year ending June 30, 1899, exceed the receipts of the preceding year by \$2,635.27. Owing to the increase of tonnage of steamers, mainly caused by the Yukon trade, and the additional work of inspecting steamers without certificates, not registered in the Dominion, the work of inspection has been increased in most of the divisions. A new inspector of machinery, who is also inspector of hulls, was appointed in British Columbia. The total expenditure in connection with inspection was \$28,035.49, showing an increase of expenditure for the last fiscal year of \$1,693.20.

EXCURSION ON DRAINAGE CANAL.

Capt. Richard Armstrong, Chicago, master and owner of the steamer Sailor Boy made an application, which was not granted, to the sanitary board in charge of the Chicago drainage canal for permission to make regular passenger trips down the canal to points on the Illinois river. It will be years before small steamers even of the size of the Sailor Boy can make the trip, owing to the bridges and the fact that the canal does not extend beyond Lockport. The application, however, set the commissioners to thinking and an effort will be made to urge appropriations that will allow navigation by passenger and local freight lines through to the river ports.

ADDITIONS TO THE NAVY.

At the meeting of the Naval Board on Construction, March 21, the question of the increase in the Navy was considered. It was decided by the Board to proceed without further delay on the plans for the construction of three first-class battleships and three armored cruisers. No material change will be made in the plans for the battleships, as agreed to by the Board several weeks ago, with the possible exception of the question of turrets, which is dependent upon the trial of the Kearsarge, April 3. The battleships, as now decided on, will be of about 13,500 tons displacement, have a speed of not less than 18 knots, twin screws and triple expansion engines. Their batteries will comprise four 12 inch, two in each turret, fore and aft; four 8s and fourteen 6s. The armored cruisers will probably be vessels of at least 14,500 tons displacement, 22 knots speed, and with batteries of four 8 inch guns in two turrets, and a large number of rapid fire 6 inch guns in broadside. At the same meeting of the Board on Construction the question of reconstructing the cruiser Boston upon the lines recommended by the Board of Survey was considered. This board has recommended to the Department the Boston be rebuilt with a change from a single screw to a double screw. All of the members of the Construction Board, except Rear Admiral Hichborn and O'Neill, endorsed these recommendations. The matter was submitted to the Board on Inspection and Survey, which upheld unanimously the minority report of the two officers. The Boston, therefore, will remain a single screw cruiser, but will be well overhauled before she is sent to sea.

NEW REVENUE CUTTERS.

A special from Washington says that Townsend & Downey, shipbuilders, of New York, who endeavored to obtain a contract for building one or two protected cruisers for the naval service, will probably not receive the contract for building a revenue cutter for the lakes.

Under authority of Congress, Capt. Chas. Shoemaker, chief of the revenue cutter service, prepared plans for a revenue cutter for the lakes 178 feet in length, 30 feet beam, and to have a displacement of 620 tons. Townsend & Downey submitted a bid sufficiently low to receive attention, but not knowing the extent of the bidders' plant, it was deemed advisable for a board to make an inspection, which resulted in an adverse report. Capt. Shoemaker also made an inspection of the plant and he has approved the report of the board. It is understood that new bids will be invited. The new cutter will probably be christened the Mackinaw.

Proposals will be invited shortly for the construction of a revenue cutter for the Pacific coast. The department is anxious to obtain authority to build two revenue cutters for Puerto Rico. As soon as the civil government supersedes the military in the Philippines, steps will be taken to secure authority for the construction of revenue cutters for that archipelago.

HOLLAND SUBMARINE TORPEDO BOAT.

In a report prepared by Lieut. H. H. Caldwell, U. S. N. on the trial of the submarine boat Holland which has been submitted to the House Naval Committee, Lieut. Caldwell says that there was no accident or hitch of any sort. The mechanism worked easily, the crew was confident and skilful, the slight pitch of the boat on submersion disappeared when she attained the required depth, the torpedo was discharged with the greatest ease, and only a slight shock occurred when it left the tube. He thinks the duties of the crew could be easily performed by petty officers of the Navy after a short trial. He says also that a determined enemy, with a submarine boat like the Holland, could have made the occupation of Manila Bay by Admiral Dewey's squadron impossible. Admiral Dewey concurs in the report.



CHICAGO.

Special Correspondence to The Marine Record.

The steamer Gordon Campbell has been chartered for oats to Sarnia at 1 3/4 cents.

Geo. Tomlinson, of the firm of La Salle & Co., of Duluth, was in Chicago Monday.

Capt. James Davidson stayed off here Monday, on his way home to Bay City from Hot Springs.

Capt. S. R. Chamberlain and F. B. Higgle, vessel and insurance agents, will remove their offices to Room 4, Rialto Building.

Engineers W. J. Swain and John arrived here last week to fit out the machinery of the Anchor Line steamers Codorus and Schuykill.

John C. Richberg, of this city, has collected a claim for nearly \$1,900 for wages due to Capt. S. R. Chamberlain from the Escanaba Transportation Co.

Capt. Fred. Houghton, of Racine, stayed off here Monday, on his way to Lorain, O., where he has gone to see after the fitting out of the new steamer, J. J. Hill, of which he has been appointed master.

The many friends of Wm. E. Holmes, of the firm of J. A. Calbick & Co., will be glad to know that there is a slight change for the better in his condition. He has been suffering from pneumonia for nearly three weeks and has been in a very critical state.

Capt. James Davidson, of Bay City, Mich., threatens to sue the Chicago drainage canal board to recover \$7,500 for repairs made a year ago to the sanitary district's yacht Juliet. The trustees declined to pay the bill. They say the expenditures were not fully authorized.

The steamer Black Rock has been purchased by the Chicago syndicate, which owns the steamer City of London, from the Jerks' Ship Building Co., of Port Huron, for \$85,000. The Black Rock is a wooden boat, built in 1897, and carries about 90,000 bushels of corn.

Capt. James Barry has been appointed harbor master at this port, vice Capt. Joseph Lamoreaux resigned. Capt. Lamoreaux has gone to Detroit to fit out the steamer State of Michigan, which he has been appointed master of, by the Chicago and Muskegon Transportation Co., who recently purchased her.

Higgle & Co., vessel agents, sold the passenger steamer I. M. Weston, for Capt. Andrew Flagstead, of Montague, Mich., to the Chicago Drainage Canal Transportation Co., of this city, for \$5,000. The Weston will be used as an excursion steamer on Chicago river and the drainage canal the coming season.

Capt. Charles McIntosh, for many years master of the Graham & Morton Trans. Co.'s steamer City of Chicago, will, the coming season, be master of the H. W. Williams Trans. Line steamer Darius Cole. Capt. William Russell, who was 1st officer of the steamer City of Chicago last season, has been promoted to master of her.

The new steel barge Marsala was launched Saturday afternoon at the Chicago Ship Building Co.'s yard at South Chicago. She was built for the Minnesota Steamship Co., Cleveland. Her dimensions are 450 feet over all, 50 feet beam, 28 feet molded depth, 5,039 gross tonnage. Carrying capacity 7,500 tons of iron ore. Her cost, when completed, about \$250,000.

The Chicago Nautical School finishes its winter course this week, having put through some thirty-five candidates during the winter months, after a very successful term. It is to be regretted that only a few students remain to pass through the final examination for special prizes, for extra proficiency, from the underwriters, granted each season. It appears that a larger number of masters than usual are or have been ordered to their commands earlier than in former years.

The Rutland Transit Co.'s new dock and warehouse will be ready by the opening of navigation. The docks will have a frontage to the river of 408 feet. The warehouse a frontage of 257 feet on the river and to Kingsbury street, and will be 160 feet wide. It will be a one story and basement building, with 5 conveyors to carry the freight from the basement to the floor above. It will cost about \$55,000 and will be one of the best steamboat docks in Chicago. The extensive repairs on the company's steamers Averill and Frost at this port, and the six steamers in winter quarters at Ogdensburg are about completed.

The steamer City of Louisville arrived here Saturday, she had been detained by the ice at St. Joseph since the previous Saturday. Capt. Stewart says he encountered heavy ice about 12 miles off St. Joseph, 10 miles in width, and extending north and south farther than the eye could see. Capt. Stewart will be succeeded as master of the Louisville on

April 1st, by Capt. Donald MacLean, for many years with the L. M. & L. S. Trans. Co., and who gained great and well-deserved reputation by his heroic conduct when the steamer City of Duluth went down off St. Joseph two winters ago. Capt. Stewart will then see to the fitting out of the steamer City of Milwaukee, which he will again be master of.

The city council has passed an ordinance compelling certain street railway companies to lower the three tunnels under the Chicago river, at their own expense. The work must be begun within three months and finished within a year from the date of passage of the measure. By the terms of the ordinance the lowering of the Van Buren street tunnel falls to the West Chicago St. Ry. Co., and the lowering of the Washington street tunnel and the LaSalle street tunnel to the Union Traction Co., the North Chicago St. Ry. Co. and the West Chicago St. Ry. Co. It is required that the tunnels must be lowered to give a depth of 26 ft. in the channel. The depth over the tunnels at present is 16 ft. As the entrances to the tunnels are not changed by the ordinance, the lowering of the tunnels will make much steeper grades in the street car tracks passing through them. It is expected that the street railway companies will fight the ordinance and will not begin work on the tunnels unless ordered to do so by the courts.

A proof of the charter of the Licensed Tugmen's Protective Association Lodge No. 2, of Chicago, was shown to your correspondent a few days ago. It is elegantly designed and very appropriate for the purpose for which it is intended. Splendid pictures of the fine tugs T. T. Morford and Wm. Dickinson are represented on it, the head and foot and the sides are adorned by light-houses. Chicago Lodge No. 2, of the association, numbers 175 members. The association intend that all their members shall attend to their duty in a proper manner, and will not tolerate any wilful neglect of duties. The Chicago lodge has already gained a point for the association. An engineer, one of its members, was engaged on a tug at South Chicago, the captain of the tug not being a member of the association, the engineer refused to work with him, whereupon the captain reported the matter to the owners, and the engineer was discharged. The captain was then induced to join the association, promising to get the engineer reinstated, which he succeeded in doing, without the loss of time or pay.

The steamer Jay Gould is in dock for searching up, new wale strakes all around, some new deck and bulwarks aft and a general overhauling. The tug Tom Brown was in and received 12 new frames and 5 strakes of plank on the port side, and her butts calked, she will also get new pilot engine and boiler-houses, new hatch coamings, new fore and aft stringers, some new deck beams and a new tow post forward. The schooner Commerce is in dock, having plates on keelson fastened, and center board box and butts calked. The schooner James G. Blaine is at the derrick, having her foremast taken out and cut off, she will also receive a new foremast. The steamer John Emory Owen is receiving a new steam towing machine. The steamer Charles Hebard has had one spar taken out, and received part new decks and rail, new iron beams under her boilers, and her boilers given a thorough overhauling. The barge Aloah has received a new mizen mast, a new stem, some new rail and general calking. The barge Annabell Wilson received new stern posts, new tow posts, timber heads and some new rail.

GODERICH, ONT.

Special Correspondence to The Marine Record.

The schooner Craftsman, formerly owned by William Lee, has been sold to the Bowman Co., of Port Elgin, Ont.

The contractors, Moore & McGillicuddy, who are building the new upper structure of the breakwater have commenced operations and expect to have it completed this season.

The ice in the harbor ranges from 12 to 18 inches in thickness, while along the shore, which extends out about a mile is from 12 to 14 inches in thickness. The opening of navigation is looked for about the 10th or 15th of April.

William Marlton, shipbuilder at this port, has under construction three tugs for delivery at the opening of navigation. One for N. Dymont, of Barrie, to be used for towing on the Georgian Bay, one for the Dominion Fish Co., and the other for Purvis Bros., of Gore Bay, Ont. A large light draft tug has been shipped to Manitoba in sections for fishing purposes on the inland lakes.

The government has been carrying on blasting operations here since the beginning of the year and as soon as the ice permits dredging work will be resumed on the channel leading from the lake to the new elevator. By the 1st of May it is expected boats of eighteen-foot draft will have no difficulty in entering the harbor and with a few more weeks dredging there will be 22 feet of water from lake to dock.

The Goderich Elevator and Transit Co., Limited, Goderich, Ont., through Mr. G. L. Parsons, forwards us the following: We herewith hand you a list of appointments to vessels and condition of ice along shore and in the harbor.

Schr. Katahdin, Capt. W. J. Colwell. Todman, Capt. Alex. Lawson. Kolfage, Capt. John McDonald. Singapore, Capt. Jas. Sutherland. Dredge Arnoldi, Capt. Dan McKinnon. Str. J. H. Jones, Capt. John McGowan; Eng. A. Vrooman.

Tugs of the Dominion Fish Co.: Evelyn, Capt. John Craigie. Seibold, Capt. Peter Wylie. Sea King, Capt. Jas. Inkster. Sea Queen, Capt. Norman McDonald. Sea Gull, Capt. Dan. McKay. Clucas, Capt. Alex. Craigie.

BUFFALO.

Special Correspondence to The Marine Record.

The Buffalo Dry Dock Co., docked the steamer Alaska this week for a general overhauling and all necessary repairs.

The steamer Tacoma of the Lehigh Valley line was sold this week to J. C. Gilchrist & Co., of Cleveland. Drake & Maytham negotiated the sale.

Although the Toledo Blade states that the tug Schenck has not been sold, and that general regret would be felt in Toledo if the Schenck left that port, the transfer of that tug to Capt. Charles Maytham was recorded in the Buffalo customs house, consideration, \$1.

Nothing has been done yet towards the renewal of the pooling arrangement under which Buffalo elevators were operated last year. P. G. Cook, secretary Western Elevating Association, said; "It is probable that the renewal will be made without any material change, as there is no reason why a change should be made."

The Union Dry Dock Co., is still doing business as the Troy and Northern King docked there this week, Supt. Gaskin has all the police protection he wants and he has also had several talks with the strikers, so there is little or no reason for a stoppage of work to any great extent, that is if common sense is exercised.

Most of the vessels of the Chicago fleet are loaded and shippers at Milwaukee and Manitowoc are taking tonnage more freely. Stocks of grain at Chicago are very heavy and some of the vesselmen predict that 3 cents will be paid before the opening. Shippers at Duluth and Ft. William are in the market for tonnage and during the past few days 3 1/2 cents was offered pretty freely on wheat to Buffalo. There is not much tonnage on the market and chartering is light.

The first scooping of the season was done Saturday, when the schooner Frick was unloaded of 260,000 bushels of flaxseed. President P. J. McMahon of the grain shovellers' union selected the men for the work, as provided by the new agreement controlling the grain scooping of Buffalo. Crowds of the union men lined the docks when the Frick was being unloaded. They expressed themselves as pleased with the new state of affairs. It is now thought that there will be no repetition of the disastrous strikes of last year, which threatened to tie up most of the grain-carrying fleet.

"The present plan of discharging lumber in the port of Buffalo was devised by the Lumber Exchange, and is based on conditions having to do with the proper handling of lumber, which are peculiar to this market. There are no evils in connection with the system. The men receive liberal wages, are paid promptly in cash, without any saloon or political influence, and so far as known are in every respect perfectly contented. This statement set aside the rumors of conferences to be held with labor leaders for the purpose of eliminating middlemen in contracting for unloading vessels. Evils there may be, and no doubt are, at other ports but not in Buffalo."

The Grain Shoveling Committee of the Lake Carriers' Association has authorized Thomas W. Kennedy, as its superintendent of grain handling, to rent the steam shovels for this year at \$1.20 per 1,000 bushels. Secretary Cook of the Western Elevating Association of Buffalo, has been notified, and the matter is now approaching a definite settlement. The rate is the same as that paid for the shovels last year by the grain contractors and is understood to be fully satisfactory to the owners of the shovels. Superintendent Kennedy does not contract for the use of the steam shovels with any consideration of profit or loss, but for the actual \$1.20 paid by the Lake Carriers' Association and charged by the Western Elevating Association.

Coal tonnage is wanted, but the vesselmen and shippers cannot get together on rates, and there is very little business being done. Owners are holding out for 70 and 75 cents to Milwaukee, and the shippers say that they will not pay more than 60 cents, at which figure season contracts have been made for Manitowoc and Sheboygan. There is a good demand for boats for the first trip to the head of Lake Superior. A number of vessels are holding cargoes at 60 cents, and the vesselmen are holding for that figure. The movement will be very heavy, as stocks are low at most of the upper lake ports. Lumber shippers are offering \$3 for the season from the head of Lake Superior to Lake Erie ports, but it cannot be learned that any tonnage has been tied up. The boat owners are still talking \$3.50. The single trip rate from Duluth to Buffalo has been fixed at \$3. The steamer Simon Langell and schooner Areanac have been chartered at that figure for the first trip.

Benjamin F. Perkins, of Camden, N. J., grand secretary American Association of Masters and Pilots of Steam Vessels, paid an official visit to Buffalo Harbor (lodge) No. 41, this week, he said in an interview. "One of our men has been to Washington to look after the interests of Buffalo Marine Hospital bill, and he has just reported to me that the bill will go through all right. We are using all the power of our association to have a marine hospital built at Buffalo. Another matter of much importance to masters and pilots of steam vessels is the rule of the board of supervising inspectors which requires re-examination of applicants for license after their five-year license expires. We have represented to the board that 50 per cent. of the masters and pilots on the inland and coast waters received little or no education when young, and yet are among the very best men in the business. The board has assured us that the re-examination will be oral, and that no man will be deprived of his license on account of lack of education in his early days."

DETROIT.

Special Correspondence to The Marine Record.

The steamer C. H. Davis has been sold to Saginaw parties by Capt. Haskins.

The steamer Harlem, which has been at Craig's drydock at Toledo all winter, will be floated out in a few days.

William Pugh has sold the schooner Belle to Charles Gregory and Hans Peterson of Racine. Price not given.

John Sheehan, formerly of the Shaw-Eddy fleet, has been appointed chief engineer of the steamer Samuel F. Marshall.

Loud & Sons of Au Sable have sold the small steamer Wyoming to Gray & Shannon of Saginaw, Mich., for \$7,500.

Capt. Ole Hanson of Milwaukee has bought the schooner Emily B. Maxwell from Mrs. J. B. Mullen, of Chicago, for \$7,850.

Capt. James Davidson of Bay City has sold the steamer Robert Holland and schooner White & Friant to Chicago parties for \$25,000. They will carry lumber.

The Michigan Sulphite Fiber Company has purchased the steamer J. C. Ford from Capt. Scott of Detroit. The boat will carry pulpwood from Lake Superior to Port Huron.

The Detroit Ship Building Company has been awarded the contract to build a fireboat for the city on a bid of \$90,000. This does not include the pumps, which will cost \$10,000 extra.

Joseph Miller of Marine City is negotiating for the purchase of the steamer T. D. Stimson from George Stortz of Port Huron. The deal is about closed and the purchase price is said to be \$25,000.

A meeting of Detroit vesselmen was held at Parker & Millen's office Thursday to take action on the death of Capt. Thomas Wilson. Messrs. A. A. Parker, William Livingston and Capt. J. W. Westcott composed the committee in charge.

Lake seamen are talking of unionizing their craft again. The other time it was broken up by the Swedes, but now that wages are \$3 and \$4 a day out of Chicago and \$45 a month here, they think it is time to try and enforce some regular rate. A meeting will soon be held in Detroit to discuss the plan.

Milwaukee vessel agents quote rates on grain as follows: To Buffalo—corn, 2 3/4 cents, heavy clipped oats 1 3/4 cents, natural oats 1 1/2 cents. To Midland—corn, 2 or 2 1/2 cents, heavy clipped oats, 1 1/2 cents. The steamer Brazil is to deliver her cargo of corn at Midland and not Buffalo. Her charter was effected in Chicago, and the rate is supposed to be 2 cents.

A higher coal rate from Lake Erie to Milwaukee and Chicago is expected this spring than was offered last year. In 1899 the early rate was 30 cents, but as much as 50 cents is looked for this year. Despite all talk of a coal famine in the Lake Michigan and Lake Superior regions last winter due to the shortage in Lake Erie shipments, the famine did not come. Duluth is a little short just now on soft coal but the other sort is plenty.

Some brokers still continue to quote the season contract rate on ore from Escanaba to Lake Erie ports at \$1. To Tonawanda and Buffalo the rate is higher, as only vessels of the smaller class can be employed. A recent quotation of \$1.25 per ton may have applied to the former port. Ore has been contracted from the head of Lake Superior to Detroit, a slow dock with horse hoists, at \$1.45 per ton. On soft coal from Ohio ports the Reiss Coal Company of Sheboygan and Manitowoc has made season contracts at 60 cents per ton.

Capt. James B. Foot, of Detroit, has been appointed port captain of the Algoma Central Steamship Company, with headquarters at Sault Ste. Marie. Capt. Foote is only 25 years of age, but his record on the lakes has well fitted him for his new position. The Algoma company has a large line of boats plying in the passenger and freight trade between the "Soo" and Mackinaw. The manager of the company is now in England negotiating for several more steamers, which will be brought across the ocean to the lakes and added to the line.

There are 150,000,000 feet more lumber to come out of the Duluth district this year than last, yet vessels aggregating a season's carrying capacity of over 100,000,000 have been withdrawn from the lumber business and placed in the ore trade. The situation is strained and lumbermen are buying up what available tonnage they can lay hands on. Indeed, there is more buying of lumber boats than chartering, and as practically no new tonnage will be turned into the lumber trade to offset the loss of the boats, a serious condition may be produced both on the docks and in meeting the demand.

The strike of the Union Drydock at Buffalo is assuming serious proportions, but there is little danger of Detroit or any other lake port suffering from a sympathetic strike. Some weeks ago the ironworkers and machinists went out at Buffalo, and six ships of the Union Transit Co. are said to have had their boilers cut apart so as to make them helpless until repaired. The brotherhood of boiler-makers is said to have decreed that none of the members at any of the lake ports shall assist in repairing any vessels sent from Buffalo, nor shall Canadians be imported into Buffalo. This effectively ties up one of the big lake drydocks, and for a time it was feared that all the drydocks on the lakes would be closed to force the Union dock to grant the demand for an increase in wages.

DULUTH-SUPERIOR.

Special Correspondence to The Marine Record.

On a cargo of wheat, Duluth to Buffalo, 3 1/2 cents was offered this week, for the first trip of the season.

The small steamer J. C. Suit leaves Two Harbors for Grand Marias and intermediate points Thursday morning, weather and ice permitting.

General Manager D. E. Ford, of the Superior Ship Building Co., has resigned and will shortly go east to take a position with a large shipbuilding concern there. It is understood that the place will not be filled, but that Capt. Wolvin will act as general manager and W. A. Thompson, formerly with the company, will act as superintendent.

A Duluth vesselman says that it is as certain as that navigation will open that there will be an independent vessel towing company in Duluth harbor the coming season. He says that the Maythems at Buffalo are making contracts at the present time to tow boats in Duluth harbor and at other ports, where they may be represented. A Duluth man says that one of the Maythems told him that three tugs will be sent to Duluth as soon as navigation opens.

Vessel owners are talking quite bullish about the opening rate on wheat. Still it is possible to get boats at 3 1/2 c., just how much could be had is hard to say, but the market can be filled fairly easy, although a boat or two is being chartered nearly every day, and it is very likely that upwards of 2,500,000 to 3,000,000 bushels of room is now under charter. With the 20,000,000 bushels of grain here on April 10th, and there will be that much, it is plain to see that a large amount of room still remains to be chartered.

The condition of the coal supply at the head of the lakes seems to be getting worse than ever. Instead of soft coal being scarce there is none at all. Most of the office buildings in the city are burning slack, "run of pile" and pea coal. Soft coal is \$5.50 a ton, which is more than it has ever been before at the head of the lakes. The agents for the coal companies in the city say that the people are lucky to get coal for that price. The finer grades of hard coal such as pea and buckwheat are very scarce and almost impossible to procure.

Isaac Stephenson has completed the largest lumber deal of the year on the Menominee and one of the largest that will be made in the United States this year. He sold to the Edward Hines Lumber Co., of Chicago, the coming season's product of two mills, those of the N. Ludington Co. and the Stephenson Manufacturing Co. The sale will aggregate 45,000,000 feet or more, and includes lumber, lath and shingles. The consideration is \$1,000,000. The lumber will be shipped from Marinette during the coming season. The Hines company purchased the N. Ludington cut last year.

The work of fitting out vessels in the Duluth-Superior harbor for the season of 1900 is in progress on about half a dozen well known vessels. The steamer E. M. Peck, which was purchased the past winter by the Calumet Steamship Co. and which will carry ore this season between Escanaba and South Chicago, is one of the boats that is being fitted to go into commission. The Empire City and Zenith City of the American Steamship Co. is another in the hands of the fitters out. The Kearsarge, which will be in the Canada-Atlantic Transit Co's. fleet this year, is also being fitted out.

In the opinion of a vessel agent at Duluth, the collapse of the flour trust and the tying up of the milling properties at the head of Lake Superior is going to work injury next summer to the line freighters. The flour mill combine was a bad thing for the flour business at the head of Lake Superior as it shut down all the mills and thus destroyed their business. Even should they reopen it will take some time to build up business for their various brands. The injury to freighters will be in loss of cargoes from Duluth. The want of a steady local supply of flour will show itself in lake and rail rates, and the idleness of the mills will mean a good deal to some of the steamer lines.

The condition of coal supply at the head of the lakes seems to be getting worse and worse. Instead of slack and other soft coal being scarce, there is none at all. The coal companies manage to keep their regular customers supplied with the soft variety of fuel by a few all rail shipments that are coming in. Considerable coal will come into Duluth all rail in April and if navigation does not open as early as has been expected the all rail receipts at the head of the lakes will amount to considerable before the boats get running. The shipments of coal by lake to the head of the lakes during the coming season will be heavy, and it is hardly likely that next year will see such a scarcity of fuel.

For a number of years there has been a good deal of talk of developing a large water power for operating the industries of Duluth, but none of the schemes thus far proposed have ever materialized. A new project is now being worked up. It is proposed to divert a part of the water from the large drainage areas of Eastern St. Louis and Lake counties into the upper Cloquet river. A dam will be built on that stream near the Vermillion road crossing. This is at a point 796 ft. above the level of Lake Superior and it is the plan of the company to store a part of the flow in a series of reservoirs, extending south through Wild Rice Lake to the outskirts of Duluth, and thence carry the water to the brow of the hill back of the city proper, by canal. From this point, 766 ft. above the level of the harbor, a hydraulic pipe line will be laid directly down to the bluff to a power house on Rice's Point.

CLEVELAND.

Special Correspondence to the Marine Record.

Capt. John Mitchell will hardly reach home before the end of April. He was last heard of in Italy as being at Rome on Tuesday of this week.

It is stated by the Plain Dealer that the Tonawanda Lumber Company has secured controlling interests in the steamer W. L. Wetmore and schooner Brunette.

Mrs. Capt. Thomas Wilson and her daughter Mabel, left Jerusalem on Monday last with Capt. Wilson's remains. Mrs. Wilson cabled that she would reach Cleveland about the middle of April.

Mr. Kenealy, of the Weather Bureau, is looking into the question of placing signal towers, or tripods, at the stations within this district. Lorain, Cleveland, Fairport, Conneaut and Ashtabula will probably be recommended as suitable locations for additional display signaling. Other forecast officials on the lakes are asked to take similar steps.

Messrs. Potter, Teare & Co., lumber dealers, purchased this week the steamer Mary A. McGregor, 711 tons. Capt. Henry Brock of this port has taken charge and George H. Bowen, of Port Huron, will be engineer. The McGregor will be placed in the Lake Superior lumber trade.

Some ore charters were made this week at \$1.10 Escanaba and \$1.15 from Marquette. One shipper has placed nearly 100,000 tons at the above freight figures, the ore being already sold. These rates, with \$1.25 from the head of the lakes, are now the quoted going rates and vessels must await later developments to improve on them.

Coal tonnage continues in good demand, but there is not much chartering being done. Shippers from ports west of here have paid 60 cents on a number of cargoes for the head of Lake Superior, but shippers from the Pittsburg district are only offering 50 cents. Milwaukee shippers are not doing any business, and the season and the wild rates for that port have not been fixed. Shippers from the Ohio district will load all the coal possible this month.

The following shipping masters have been appointed by the Lake Carriers' Association for 1900: A. R. Rumsey, chief shipping master, Cleveland; W. Wall, assistant, Cleveland; J. W. Hanson, Chicago; M. P. Felt, assistant, Chicago; L. T. Rumsey, South Chicago; William Lennon, Milwaukee; Ed. Nesbitt, Buffalo; Pat Mitchell, Toledo; J. A. Logan, Ashtabula. J. A. Logan was appointed at Ashtabula in place of D. Harrington, and L. T. Rumsey at South Chicago in place of R. Anderson.

J. C. Gilchrist has added another vessel to his fleet. This week he purchased the wooden steamer Tacoma from the Lehigh Valley Transportation Co., Buffalo. The price was not given out, but it was about \$65,000, and the terms were cash. The Tacoma was built for Capt. Thomas Wilson, who died at Jerusalem a week ago, by Quale, of Cleveland, in 1881. She is fitted for the package freight trade and will carry about 2,500 tons. The steamer has always been kept up well and she is in good shape.

The death of Capt. Wilson a week ago to-day, at Jerusalem, Asia, is deeply regretted at all lake ports, and more especially here. In making my regular and special rounds I have yet to hear the first word derogatory to the late captain's style of doing business, general bearing, or his treatment of men during the last twenty years. I do hear, though, of scores that he has helped in various ways and who realize that they have lost a good friend. There are but few men in the marine community whose loss will be felt as much as that of the late Capt. Thos. Wilson.

Mr. John T. Walsh, vice president of the International Longshoremen's Association, stated that in two weeks all the men employed on the docks at Lake Erie ports will be members of that organization. A meeting of the hoisting engineers and the brakemen and firemen on the coal docks and the ore docks at the furnaces was held at the Arch hall this week and a new union will be organized. A meeting of the package freight handlers will be held at Erie next week. All the package freight lines doing business at Buffalo, Erie, Fairport and Cleveland will be represented. President Keefe and secretary Barter of the Longshoremen's Association will attend the meeting. A schedule of wages will also be adopted.

The ore freight situation is unchanged this week. Shippers are practically through with season chartering and nothing has been done about wild rates. A number of vessels are under charter for the first trip from Escanaba at the going rate. The upper lake railroads are beginning preparations for service and will be putting on the first ore trains shortly. They propose to have their docks full by April 20. At many properties stock pile room is even now pretty well exhausted, and there is call for as early shipment to dock as can be had. All over the region the amount of ore coming up daily is wonderful. Some of the vesselmen figured on an early opening and tied up for nearly their full capacity, and some of them will have about all they can do to carry out their contracts if a general start is not made until the latter part of April.

The tug Sarah Smith, of Bay City, has been purchased by Capt. Walter Lloyd and J. O. Smith, of Duluth, and she will go to Duluth at the opening of navigation to engage in general towing. She is of 45 gross tons and was built in 1883 at West Bay City. S. L. Boutel was her owner. The Sarah Smith is 75 feet long, 17 feet beam and 5 feet deep.

CHICAGO RIVER CENTER PIERS.

Capt. James R. Sinclair, manager of the Chicago branch of the Great Lakes Towing Co., says: "There is only one end in sight—the center piers must go. If all are not removed now, then they must go by degrees, but go they must, for the best interests of our city as a port are at stake. The increased current in the river calls for immediate attention in regard to the doing away with the State street center pier, and the same applies in a lesser degree to Clark and Wells street bridges. All the bridges in the south branch, as well as in the main river, should be changed. But past experiences in the matter of the improving of the river by the authorities, have led the vesselmen to consider themselves lucky if even one of the old time nuisances is ordered out of the way.

Chicago is a big marine center, and it is growing. Much of this city's present prosperity can be traced in the past of the murky river, and what was true in days gone by is true to-day. The removal of the center piers is a business proposition, pure and simple. An outlay of a few millions for the work will be paid for by increased traffic. Chicago business men have kept in line with the ever onward march of the age. Can it be possible, then, that our marine interests are to stand still on account of these obstructions? Surely not!"

City Engineer John E. Ericson says that hereafter bascule bridges will be constructed in the Chicago river. He added that as far as the present plans go no provision has been made for the removing of the center pier structures that span the main branch, and which at State, Dearborn, and Clark streets call for speedy attention.

In the case of the State street bridge, which is admitted by marine men to be the most dangerous menace to navigation in the stream, Mr. Ericson said the city in all probability will have to get along as at present for a year or two more at least. He pointed out that the State street bridge was repaired a short time back and that it is not likely more money will be expended on it until more pressing work is attended to. Mr. Ericson stated as follows:

"The six new bridges provided for by the city authorities will be built at the two Division street crossings, Weed street and Clybourn place, in the North branch; Archer avenue and Thirty-seventh street in the South branch, and Ninety-fifth street in the Calumet river. It is estimated that \$1,250,000 will do the work, with the additional \$200,000 for bridge repairs.

"Only one bridge will be constructed across the Calumet river, although it was reported a short time ago that three would be built. At present I fear the marine men will have to rest content with the bridge conditions in the main river, and I think that the State street problem will work out even better this season than the vesselmen expect. Nothing has been done regarding the outlay of the money for repairs. However, it will be used judiciously and will be expended where it will do best service in the interest of navigation.

"All the six bridges will be built on the bascule plan and run by electricity. And I believe that taking into consideration the action of the city council in regard to the bascules, marine men can rest satisfied that the day of center pier bridges for this port is about ended. The change can not be brought about in a day, but at last a good start has been made. The main river will follow later."

EASTERN FREIGHTS.

Messrs. Funch, Edye & Co. report the eastern freight market as follows:

The business in steam charters closed this week has shown in its leading features a repetition of the underlying conditions prevailing during the preceding one. The demand for grain tonnage is very light; the fixtures made mainly represent the settlement of former sales, and holders of tonnage for Cork f. o. for this month's loading appear as charterers at from 1½d. to 3d. below the figure demanded by owners of open boats. The shorts appear to be filling up their requirements in the Gulf, and, this being accomplished, new fixtures will have to conform to the considerably lower level of current parcel freights. The demand from the Atlantic ports is at the moment limited to tonnage for the Mediterranean for which direction owners show little desire to commit their vessels. A fair enquiry continues for timber from the Gulf, but owners' figures are in excess of shippers' limits. A number of steamers has again been closed on time for general purposes at rates favoring owners; the enquiry for tonnage for coal has been active, but the scarcity

of boats and owners' increased demands block all shipments on a liberal scale.

Our market for sailing vessels maintains its firm position, owing to the continued scarcity of desirable tonnage, the demand for which latter, to apply for long voyages, is active. We may add that fixtures have been few during the last week, and that we have not a single item of interest to report.

CAPT. HENRY FISH.

The subject of the following brief sketch has held licensed papers for lake service for forty-four years. In 1844, or just 56 years ago, Capt. Fish was wheelsman on the steamer Huron, Capt. E. B. Ward. In 1850 he was in the Chicago-Grand Haven trade as mate of the steamer Detroit, Capt. M. H. Estabrook. At the time of the first issuing of pilots' licenses, in 1853, Capt. Fish was mate of the steamer Pacific in the Cleveland-Sault Ste. Marie route, so that he received one of the earliest licenses issued on the lakes. In 1854 we find the subject of our sketch master of the steamer Detroit, which vessel was afterwards lost through colliding with the barque Neucius on Saginaw Bay. During the period between 1854 and 1866 Capt. Fish sailed different passenger steamers in the Ward line on their various routes from Buffalo to Chicago.



CAPT. HENRY FISH, ST. CLAIR, MICH.

In 1867 Capt. Fish purchased an interest in the lumber trade with J. L. Woods, Cleveland, and remained with that firm, sailing their vessels, etc., until he retired in 1896.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo.....	457,000	.....	40,000	48,000	405,000
" afloat.....	82,000	205,000	.....	.....	.....
Chicago.....	14,047,000	5,682,000	1,935,000	300,000	20,000
" afloat.....	85,000	3,859,000	549,000	.....	.....
Detroit.....	417,000	177,000	49,000	5,000	11,000
Duluth.....	15,687,000	1,067,000	304,000	425,000	191,000
" afloat.....	248,000	.....	.....	.....	.....
Fort William, Ont..	3,348,000	.....	.....	.....	.....
Milwaukee.....	258,000	9,000	.....	17,000	11,000
" afloat.....	.....	301,000	968,000	.....	.....
Montreal.....	51,000	15,000	509,000	14,000	31,000
Port Arthur, Ont....	209,000	.....	.....	.....	.....
Toledo.....	678,000	2,159,000	175,000	2,000	.....
Toronto.....	66,000	.....	4,000	.....	57,000
Grand Total.....	54,093,000	21,111,000	6,899,000	1,191,000	905,000
Corresponding Date, 1899.....	30,067,000	33,237,000	11,229,000	1,428,000	2,261,000
Increase.....	18,200	569,000	171,000	24,000	.....
Decrease.....	.....	.....	.....	.....	56,000

While the stock of grain at lake ports only is here given, the total shows the figures for the entire country except the Pacific Slope.

LITERARY NOTICES.

Capt. R. M. Pugsley, New York, is the author and publisher of a valuable little book—"The Pilot, a Guide to the U. S. Local Inspectors' Examination of Masters and Mates of any class of vessel"—which will be of value to the student of navigation and nautical astronomy, as well as the applicant for license. One of the notable features of this publication is that it is not restricted to methods peculiar to any particular epitome, but it is so arranged that any one may use it. Among the prominent navigators who speak of the work are the following: All applicants for ocean licenses will find The Pilot a valuable book to aid them in passing the examination.—H. J. Byrne, Master U. S. transport McPherson. The Pilot is what the name implies and is a good one. All applicants for an ocean license should secure The Pilot before entering that strange harbor where all must go to obtain the desired license.—F. L. Moulton, late master steamship Prof. Morse. The answers as given in The Pilot are such as would be expected of one who thoroughly understands the subject to which the questions refer.—G. E. Petterson, 1st officer U. S. Transport McPherson. Capt. R. M. Pugsley has supplied a long felt want by producing The Pilot, which is a standard work, and at a price within reach of all.—Frank L. Miller, master steamship Niagara, Ward Line. THE MARINE RECORD, price 25 cents.

The current issue, No. 1 of volume eleven, Journal of the American Society of Naval Engineers, has just appeared, and is in no wise behind its predecessors in value and interest. The leading paper is "The Contract Trial of the United States Battleship Kentucky, by Commander Harrie Webster, a member of the trial board. A valuable contribution by Mr. John Platt, associate member on the Society on "Practical Data relating to the building of Bent Tube Boilers," is the next in order, and contains much interesting and valuable information on a pertinent subject. Copious extracts from "The Code for 1899 for Conducting Steam Boiler Trials" gives much needed information on this subject. The most valuable paper, however, is one by Lieut. R. K. Crank, U. S. N., on "An exhaustive trial of the Government distilling plant at the Dry Tortugas." The data and information contained in this article are of the utmost value to the engineer, and the subject is treated so clearly that the layman can form a clear idea of what is meant by "triple effect" when applied to distilling fresh water. A memorandum by Lieut. Albert Moritz, U. S. N., on the value of "Freshly Hewn or Green Wood as Fuel," has reference to that officer's experience on the U. S. S. Newark while en route to the Pacific last year, when it became necessary to eke out a short supply of coal with green wood. "Interchangeability of Units in Machinery," by W. D. Forbes, is of value to the manufacturer of motive power, and presents the argument in favor of the practice in plain language. "The Properties and Possible Uses of Nickel-Steel" is a timely paper on a product of the rolling mills of the present period about which a great deal of imperfect information exists. "Power Losses in the Machine Shop," by Chas. H. Benjamin, is a thoughtful and accurate account of the inevitable cost of work in a well conducted machine shop of to-day. "Object Lessons," by Lieut. Commander A. B. Willits, U. S. N., contains many valuable hints and completes the main portion of the table of contents. The number contains 280 pages of reading matter.

POSITIONS IN THE LIGHT-HOUSE SERVICE.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE ENGINEER, 9TH DIST.,
CUSTOM HOUSE MILWAUKEE, WIS., Mar. 20, 1900.

Notice is hereby given that vacancies exist in the list of eligibles for positions of master, mate, first engineer and second engineer in the Light House Service in this district, which includes Lake Michigan, Green Bay, and tributary waters lying west of a line drawn across the Straits of Mackinac Point, Michigan.

Persons who wish to apply for the foregoing positions should obtain the proper blank forms of application from this office, either in person or by mail, and after filling them out return them to this office.

Those who have already filed applications need not do so again.

Applicants need not appear in person.

Thirty days from date of this notice, all applications received will be examined, the applicants graded according to merit, and a list of those eligible for appointment sent to the Light-House Board.

J. G. WARREN, Captain, Corps of Engineers, U. S. A.,
Engineer, Ninth Light-House District,
Chairman, Local Civil Service Board.

A PROMINENT WEATHER FORECASTER.

The transfer of B. S. Pague, A. M., LL. B., from Portland Ore., to Detroit, gives to that city one of the most successful weather forecasters in the service.

Mr Pague is a native of Pennsylvania and an undergraduate of Dickinson College of Carlisle, Pa., which he left early in 1882 to join the weather service. He served eight months in the government meteorological school in Arlington, Va., being assigned to duty at Mt. Washington. In 1883 he was transferred to Cleveland as an assistant.

In February, 1885, Mr. Pague was transferred to San Francisco as an assistant and nearly a year later he was placed in charge of the office at Roseburg, Ore. In 1888 he was transferred to one of the most important charges on the Pacific coast at Portland, Ore., remaining there until the transfer to Detroit, excepting during a temporary period in charge of the San Francisco office in 1893 and 1894.

While in the west Mr. Pague studied law, graduating from the Western Oregon Law College and being admitted to practice. He also studied the sciences and was known as a newspaper writer on special subjects. He made a careful survey of the situation in the west and in 1897 created considerable interest among the scientific men of the department by a pamphlet in which he made an exhaustive analysis of the weather conditions of the Pacific slope and of the methods and necessities in weather forecasting in that region.

Last year he took a radical stand regarding a scientific problem old as the world: The causes of the mild temperatures of the Pacific Northwest. In his pamphlet he maintains that the old belief of scientists that the "Kuro Siwo" or Japanese gulf current, caused the warm atmosphere of the Pacific slope is erroneous and that the mildness of climate is due to dynamic heat, caused by passages of compressed air from the mountain ranges to the depressed places along the coast. The problem was carefully worked out from investigations made by Mr. Pague. The pamphlet was issued in full by the Department of Agriculture, and is still creating considerable discussion in the scientific world.

It was on account of Mr. Pague's exceptional ability as a forecaster that he was stationed for so many years on the Pacific coast. Forecasters in coast cities labor under a disadvantage that is unknown to those who study atmospheric conditions from interior points. A forecaster on the lakes is warned of an approaching storm while it is yet hundreds of miles away. He knows its direction, velocity and intensity, and, it is a comparatively easy matter to estimate when and under what circumstances it will reach his position. But a forecaster at, say Portland, Ore., or San Francisco has no means of knowing when a storm is blowing in from the ocean, and is compelled to depend in a greater measure on his general knowledge of the atmospheric conditions that presage the approach of a storm. Handicapped by these disadvantages, Mr. Pague made an enviable record on the Pacific coast—a record that is prophetic of greater accomplishments in his new station, where he will have the advantage of accurate observations from every point of the compass.

ABOUT ENGLAND'S COAL SUPPLY.

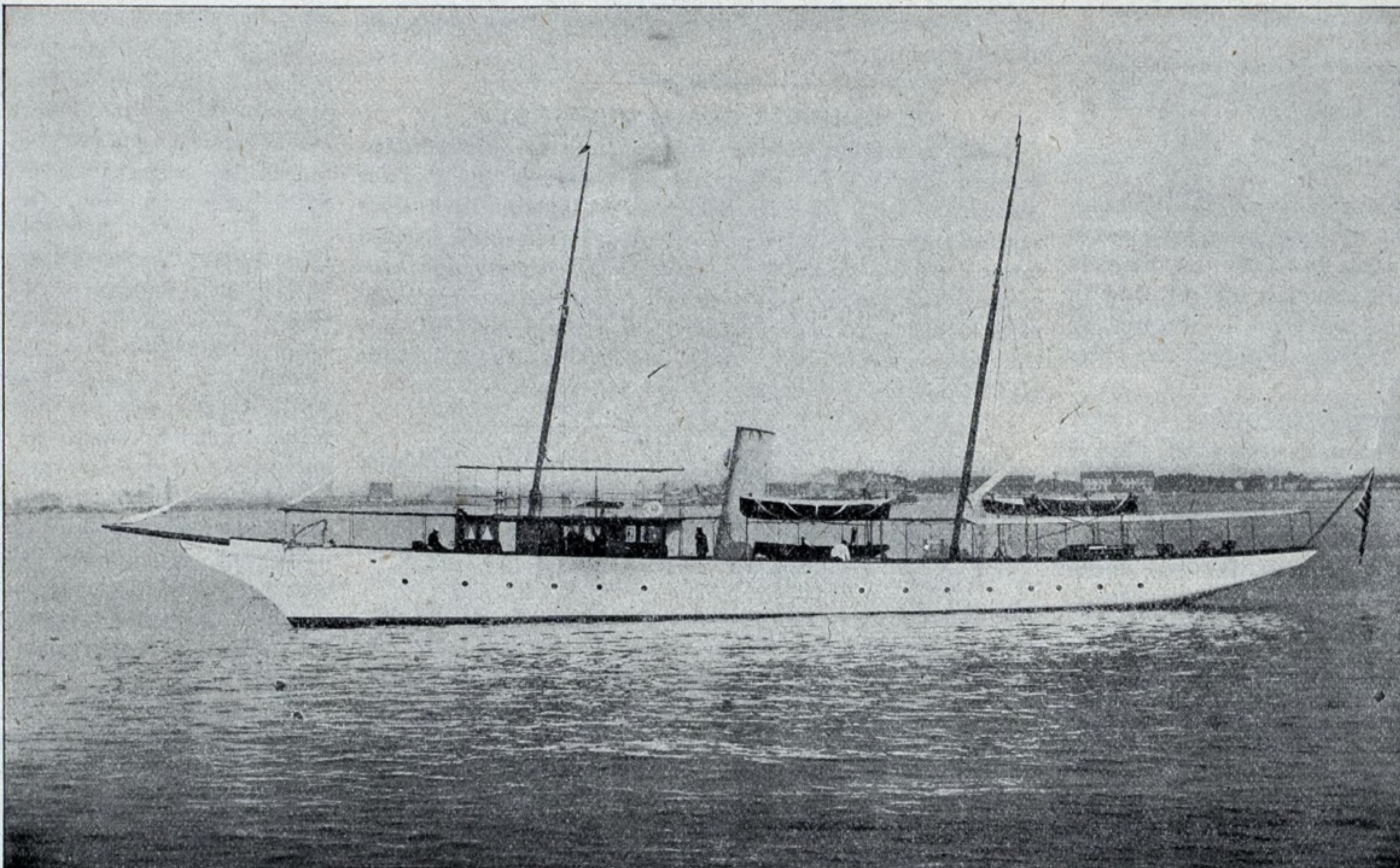
Regarding the discussion which has become general on the British coal supply of the future, the London Financial News comments in these words:

"According to geologists who are not anonymous, in four times 50 years from now we will hardly have begun to develop our resources in the coal line. If put to it, the four

states of Pennsylvania, West Virginia, Ohio and Illinois could probably supply us with this particular fuel for a thousand years to come. In England, which is no larger than one of these states, they have been mining coal for several hundred years, and they are at last very justifiably alarmed; but even there, there is no danger of the bottom being reached within the next generation. It is hardly probable that the demand for coal will be relatively greater one hundred years from now than it is to-day. New mines will have been opened up, and, in all probability, human ingenuity will have devised some cheaper and better fuel for general use. Greater scientists than the Herald's unknown expert have prophesied that the sun's rays will some day furnish all the heat that is now secured by artificial processes. As it is, no one need lose any sleep through the fear that we are to be left out in the cold."

HOW TO GET RID OF RATS.

"Le Yacht" draws attention to a cheap and very effective plan for getting rid of the rats which are so often a perfect plague on board the ships of war, yachts, etc., which they infest. The plan is one invented by M. Pierre Apery, of Constantinople. He produces, by means of ordinary reactive agencies, carbonic acid gas to any desired quantity in the hold of the rodent infested vessel. Owing to its specific gravity, the gas lies in the lowest parts of the hold, penetrat-



A HANDSOME STEEL STEAM YACHT.

Recently built by the Gas Engine & Power Co. and Charles L. Seabury & Co., Consolidated, New York.

ing into every chink and crevice, and asphyxiating the rats, the dead bodies of which can be removed after the hold has been aerated. Nothing is easier than to ascertain whether any of the gas remains in the hold, for to do so a lighted candle is sufficient. The plan certainly has the merit of extreme simplicity, and is, at all events, worthy of trial. Another way to dispose of rats without leaving their dead bodies to fester in their holes is to fill a barrel or barrels two-thirds full of water and cover the water with any garbage or other enticing stuff that will float and hide the water. The barrels should be so placed that the rats can jump into them. They will follow one another by the dozen, and once in the barrel they can never get out, having no foothold to enable them to jump.

A RAFT TO CROSS THE PACIFIC.

A raft to contain 14,000 piles is now being constructed at Seattle, Wash., by a San Francisco firm, to be towed to Japan. When completed, the raft will be 635 ft. long, 53 ft. in diameter, and will contain 14,000,000 ft. of lumber. Although rafts of this kind are frequently towed from the Puget Sound to San Francisco, it is feared, in marine circles, that the task of towing such a craft across the Pacific is somewhat risky.

NOTES.

REPRESENTATIVE FITZGERALD, of Massachusetts, the ranking Democratic member of the House Merchant Marine Committee, speaking of the position of the Democratic minority on the shipping subsidy bill, said: "I think that when the report submitted by the Democratic minority on the Shipping Subsidy Bill is presented it will be found that the members of that minority are in favor of proper legislation to build up the merchant marine of the country."

A COMPANY has been organized to build a forging plant for battleship armor and heavy gun forgings, similar to that of the Carnegie Steel Company and the Bethlehem Steel Company. Its promoters have bought thirty acres of land on the Delaware river, near Chester, Pa., and it is rumored that John Fritz, who was for thirty years superintendent of the Bethlehem Steel Company, and who built their forging plant, has been engaged as constructing engineer. It is stated that the Diamond Steel Company will erect two large blast furnaces at Wilmington and supply this new forging company with its billets and that an iron mine in Cuba has been secured.

THE naval estimates of England for 1900 reached \$137,500,000, or \$4,600,000 more than those of 1899. This budget not only provides for an increase in ships, but of 230 more officers and 4,020 more enlisted men, made necessary by the

increase in war vessels up to the present. It is proposed to lay down two battleships, six first-class armored cruisers, one second-class cruiser, two twin-screw sloops, two gunboats and two torpedo boats. This will make a total under construction this year of seventeen battleships, twenty armored cruisers, one first-class protected cruiser, two second-class protected cruisers, one third-class cruiser, eight sloops, two gunboats, four torpedo boats and twenty-one torpedo boat destroyers.

A COMPLETE steel plant, employing between 3,000 and 4,000 men, is being built for the Dominion Steel Company, on the island of Cape Breton, Nova Scotia, by the Riter-Conley Co., of Pittsburg, Pa. It will have ten open-hearth and four blast furnaces, and the product will all be for foreign shipment. The ore is secured from Newfoundland and the coal is mined a few

miles from Sidney. The Dominion company will make its own coke, the ovens being under construction. The docking facilities of the harbor of Sydney are of the best, and a railroad, which is being built on the island of Cape Breton, will connect with the main-land over a bridge already constructed. Sydney was formerly a summer resort, Cape Breton being termed the Switzerland of America by New Yorkers who had cottages there.

U. S. DISTRICT JUDGE DE HAVEN gave judgment in favor of Frank Olsen against the schooner Uranus for \$1,000 damages. The effect of the decision will be to compel masters of vessels not having a surgeon on board to put into a near-by port when any one receives an injury necessitating immediate surgical attention. Olsen sued the owners of the schooner Uranus for damages for injuries sustained by him while a member of the crew. When the schooner was about five hundred miles from Port Townsend the boom broke and a piece of it struck Olsen and fractured his leg in two places. Olsen asked the captain to put into Port Townsend so that he might receive surgical treatment, but the captain refused to do so and carried Olsen on the vessel into Alaskan waters. The decision holds that the captain was not responsible for the accident, but that it was his duty to accede to Olsen's request and land him at the nearest port where the services of a surgeon could be had.



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CLEVELAND, O., MARCH 29, 1900.

THE congested state of the Chicago river and the increased difficulty of navigating it in the strongly reversed current caused by even the present limited flow into the drainage canal leads to the general impression that the full flow of 10,000 cubic feet per second which will soon be required by law would make additional traffic through the river impracticable.

THE death of Capt. Thos. Wilson, in Jerusalem, Asia, a week ago, is one of the most regrettable losses of the year. Capt. Wilson lived a life so as to leave this world better than when he joined it. There are but few men engaged in the lake marine business whose loss will be felt like that of the late well known vessel owner. His family, the general marine community and the MARINE RECORD must bow to the will of the Almighty in taking away their dear and valued friend. May his peace and happiness in the better land be equal to that which he persistently and consistently endeavored to dispense while with us.

ON the claim that some of the best masters of vessels on the Great Lakes, men of years of experience, might make a very poor showing if compelled to submit to an examination in writing, the Shipmasters' Association is opposed to the rule of the steamboat inspection service, adopted some time ago, which provides for written examinations upon renewal of licenses. It is urged, and rightly so, that many shipmasters who have been highly successful, and who are thoroughly versed in everything pertaining to the operation of a ship, have come up from the bottom of the ladder, and would therefore be unable, very probably, to put in writing to the satisfaction of some inspectors all that they know about the rules of the service.

THE Sanitary District of Chicago has sent a committee to petition Congress for a deep waterway between the terminus of the Chicago drainage canal and the Mississippi river. It is proposed to deepen the channels of the Desplains and Illinois rivers to 14 ft., and construct locks for fleets of barges of such depth as will permit a greater depth of channel should it be decided in the future to construct a ship canal. For convenience of discussion the course of the proposed waterway has been divided into three sections, as follows: From the end of the drainage canal to Lake Joliet, eight miles; from Lake Joliet to Utica, 54 miles; and from Utica to the mouth of the Illinois river, 227 miles. The estimated cost of the section between the end of the drainage canal and Lake Joliet is \$8,000,000; of the section from Lake Joliet to Utica \$10,000,000; and of the section from Utica to the mouth of the Illinois river, \$7,000,000. One of the arguments presented to Congress is that the dredging of the rivers will reduce the damage to the adjacent lands by flood.

ON THE HIGH SEAS.

A decision involving the "law of the flag" and recalling the sinking of the French line steamship La Bourgogne in a collision with the English steamer Cromartyshire, off Sable Island, July, 4, 1898, was handed down by Judge Bunn of the United States Circuit Court of Appeals, Chicago. The decision dismisses, for want of equity, the suit of Charles L. Rundell against La Compagnie General Transatlantique, owner of the ill-fated vessel.

Edwin F. Rundell, whose estate brought suit for \$55,000 damages was one of the hundreds of persons who was drowned in the accident. Judge Bunn dismissed the suit on the technical ground that it was not shown that the death of Rundell occurred upon the steamship La Bourgogne, and also for the reason that in cases arising in tort upon the high seas the United States District Courts, sitting in admiralty, can not enforce the local laws of France.

BIDS RECEIVED.

The following were the proposals received by Major C. McD. Townsend, Corps of Engineers, at Rock Island, Ill., March 2, for the construction of a wooden hull steamboat: Ed. J. Howard, Jeffersonville, Ind., delivered at Jeffersonville, Ind., \$32,000; recommended for acceptance. M. A. Sweeney Ship Yard and Foundry Co., Jeffersonville, Ind., delivered at Jeffersonville, Ind., \$36,499. Elizabeth Marine Ways Co., Elizabeth, Pa., delivered at Louisville, Ky., \$50,000. Iowa Iron Works, Limited, Dubuque, Iowa, delivered at Dubuque, \$37,675.

DEMURRAGE CLAIM DISMISSED.

Speaking for the court of appeals, Judge Jenkins, of Milwaukee, dismisses the claim of the owners of the steamer Aurora and the schooners George W. Adams and J. I. Case against a steel company of Chicago. The owners entered into a contract with the steel company to carry 90,000 tons of ore. They brought suit because in waiting for the vessel to be loaded and unloaded there was much delay, and they claimed damage for thirty days' demurrage. Judge Jenkins says the claim is not covered by the contract.

A STEEL plant is to be erected at Hamilton, Ontario. The plant will consist, primarily, of four blast furnaces with a daily capacity of about 700 tons. Two large open-hearth steel plants are on the programme, with a total of 24 fifty-ton furnaces, and a daily capacity of 2,400 tons. In connection with these will be a mixer plant and pig casting machines. A blooming mill will be built to take care of the entire product of the open-hearth furnaces. The finishing departments will consist of rail, billet and plate mills. One plate mill will be arranged to roll plates for marine, and boiler work, and the other for rolling plates for structural and bridge work. There will also be a machine shop and foundry, and blacksmith shop. It is the intention to use electrical power almost exclusively. Important ore and coal properties are secured on a scale that will give the concern ample resources of raw material and fuel. The Wellman-Seaver Engineering Co., of Cleveland, Ohio, designed the plant throughout, and will supervise its construction. European capital is largely interested in the enterprise, and the Nickel-Steel Co., of Hamilton has a future before it, that is not only full of promise to those directly concerned in its prosperity, but as bearing on the iron and steel industries of our Canadian neighbor across the border.

"A CITIZEN of Philadelphia, who will not permit his name to be known," says the Philadelphia Ledger, "has given \$5,000 toward a fund for the erection of a worthy memorial to Captain John Ericsson. It is proposed that the memorial shall be a monument, to be placed upon the river bank in Fairmount Park. The leading feature of the structure is to be a statue of Ericsson, and the committee of the Fairmount Park Art Association in immediate charge of the project desires that the sum of \$35,000 be secured, so that a memorial may be erected in every respect commensurate with the fame and the timely and valuable services of Ericsson, rendered at one of the most critical periods of the civil war. He was the inventor and builder of the famous Monitor, which so successfully fought the Merrimac in Hampton Roads. Friday, March 9, was the thirty-eighth anniversary of that famous sea fight which in three hours revolutionized the navies of the world. New York City erected a fine statue in his honor on Battery Park some years ago, and Sweden, his native land, also has a monument in his honor."

MARITIME LAW.

UNITED STATES DISTRICT COURT, EASTERN DISTRICT OF WISCONSIN. JOSHUA RITCHIE, VS. F. A. DENNETT. IN ADMIRALTY.

On libel in personam for wages. M. C. Krause for libellant. Van Dyke, Van Dyke & Carter for Respondent.

Seaman, District Judge—There is no material conflict in the testimony. The fact of an understanding between the parties that the libellant was engaged to re-enter the service of the respondent in the season of 1899 was frankly conceded by Mr. Ramsey and by the master, both testifying on behalf of the respondent. The arrangement was oral and the conversations by which it was made are not stated in exactly the same terms on one side and the other; the expression "for the season" is stated on the part of the libellant to have been used in reference to the engagement, but disputed on the other side. Even if the season was referred to in the words stated by the former, a definite promise binding both parties for the season as an entirety is not shown. It seems manifest from all the circumstances that no definite term except from month to month was intended or understood, and in the absence of proof of a well recognized custom to make such executory contracts obligatory for the season, the promise cannot extend beyond a month as determined by the rate and term of wages. To that extent I am of opinion that the contract was binding upon the respondent, unless affected by the provisions of Secs. 4520, 4521 and 4523 R. S. U. S., rendering the contract void for want of written articles.

Whether the sections referred to are applicable to navigation on the lakes is a question on which decision of several district courts are at variance. In this district Judge Miller appears to have doubted such application (City of Fremont 2 Biss. 417) and Judge Jenkins held in United States vs. Bain, 40 Fed. 455, that these and kindred sections do not so apply but have "reference to ocean navigation alone." Fortunately, the present case is not dependent upon that troublesome inquiry, as it is apparent from all the circumstances that neither party contemplated voyages of the steamer extending beyond Lake Michigan, but that she was engaged in the lumber trade, bound to ports of Wisconsin and Michigan only, and therefore not reached by the statute which applies to contracts of vessels "bound from a port in our state to a port in any other than an adjoining state." Thorsen vs. Peterson, 9 Fed. 517. It is true that the libel contains a general allegation of the vessel as engaged in navigating the waters of the lakes, and no such exception is stated, but the fact being undisputed that no voyages were intended beyond the excepted limits I am of opinion that the contract so made is not within the statute, if otherwise applicable.

The excuse which is set up by way of defense for rejecting the libellant from employment on the ground of insubordination during prior service, although to a certain extent supported by the testimony, was either condoned or set aside by the action of respondent. I find, therefore, in favor of the libellant that he is entitled to allowance of wages for one month \$70 and the value of board \$15, making \$85 as his damages for breach of the contract, and that the respondent is entitled to deduction therefrom of \$55 as wages earned by the libellant during the month for his services on a fishing tug—which the testimony shows were continued until June 22—leaving a balance in favor of libellant, for which decree will enter, of \$30 and costs.

The claim for trip to Milwaukee to attend to repairs of engine is not a maritime service and not allowable in admiralty.

Let decree be entered accordingly.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 9TH DIST.,
CHICAGO, ILL., March 26, 1900.

RACINE REEF AND MANITOWOC SPAR BUOYS.

Notice is hereby given that the red spar buoy, marking the eastern point of Racine Reef, Lake Michigan, Wisconsin, has been reported out of position.

Also, that the black spar buoy, marking the northerly end of the shoal off Manitowoc, Lake Michigan, Wisconsin, has gone adrift.

These buoys will be replaced as early as practicable.

By order of the Light-House Board.

F. M. SYMONDS, Commander, U. S. Navy,
Inspector 9th Light House District.

THE steamer Brazil loaded 120,000 bushels of corn at Milwaukee on Tuesday for Buffalo. The rate is 2 3/4 cents.

ASTRONOMICAL DATA FOR APRIL.

Astronomical data for April, 1900, furnished to the MARINE RECORD by the Washburn observatory:

Mercury is now a morning star and may best be seen about April 21, on which date the planet reaches greatest elongation west from the sun. It appears as a first magnitude star and will rise very near the east point of the horizon. Venus, on the other hand, reaches greatest elongation east April 28, when it will be over 65° distant from the sun and appears in the telescope exactly as a half moon. The brilliancy of the planet is still on the increase and it is by far the most conspicuous object in the evening sky, when the moon is not present. Mars begins to appear as a morning star but is still too near the sun for favorable observation. Jupiter and Saturn are the brilliant planets of the morning sky, the former the most conspicuous star then to be seen and followed by the latter in the southeast.

The times of sunrise and sunset at Milwaukee for the month are as follows:

	SUNRISE	SUNSET.
Apr. 1	5:34	6:18
" 11	5:17	6:29
" 21	5:01	6:41
" 30	4:47	6:51

The times of the moon's phases are:

First Quarter	April 6, 2:55 p. m.
Full moon	" 14, 7:02 p. m.
Third Quarter	" 22, 6:33 a. m.
New moon	" 28, 11:23 p. m.

The principal fixed stars visible during the month in the evening sky are: To the west, Aldebaran, Capella, Sirius, the bright stars of the constellation, Orion, Procyon, Castor and Pollux; near the meridian, Regulus and the bright stars of the Great Dipper; to the east, Arcturus and Spica.

STEAMBOAT OFFICERS APPOINTED FOR THE SEASON OF 1900.

ANCHOR LINE, Buffalo.—THE ERIE & WESTERN TRANSPORTATION CO., E. T. Evans, western manager.—Str. India, Capt. P. O'Neil; Eng. Daniel Donohue. China, Capt. Chas. Christy; Eng. Jno. Wise. Japan, Capt. John Doherty; Eng. Wm. Wilson. Alaska, Capt. Edwin Martin; Eng. E. S. Davis. Wissahickon, Capt. John McCarthy; Eng. Fred Rehbaum. Delaware, Capt. J. H. McAvoy; Eng. Albert Edgar. Juniata, Capt. Geo. Delaney; Eng. Jno. Forrester. Conestoga, Capt. H. Cronkhite; Eng. A. E. Welch. Lycoming, Capt. L. Wright; Eng. A. J. Jones. Conemaugh, Capt. F. Bloom; Eng. Wm. Millington. Lehigh, Capt. J. H. Berow; Eng. Tim Griffin. Clarion, Capt. Chas. Nelson; Eng. Jas. Erskine. Susquehanna, Capt. Dall Ryder; Eng. Geo. McLeod. Codorus, Capt. A. McKenzie; Eng. Wm. J. Swain. Schuylkill, Capt. H. O. Miller; Eng. Jno. Jordan. Mahoning, Capt. Jas. Corcoran; Eng. Wm. A. Black.

DAVID VANCE & Co., Milwaukee, Wis.—Str. Frank L. Vance, Capt. E. B. Marquette; Eng. Geo. E. Robinson. Russell P. Flower, Capt. Frank W. Van Patten; Eng. Daniel Darcy. Ferd. Schlesinger, Capt. D. P. Craine; Eng. A. R. Fortres. Maryland, Capt. J. E. Apax; Eng. M. Conley. Manchester, Capt. T. Kelly; Eng. James Grant.

NAVIGATION ON LAKE ERIE.

The Cleveland, Toledo and Put-in-Bay route will be operated jointly by the Cleveland & Buffalo Transit Co. and the Detroit & Cleveland Navigation Co. again this season. The C. & B. steamers, State of New York and State of Ohio and the D. & C. line steamer City of the Straits will take care of the business. General Manager Newman of the C. & B. line stated that an early start was out of the question. There is more ice in Lake Erie than there was a year ago, he said, and it will be pretty close to May 1, before the port of Buffalo is open.

The big steamers City of Buffalo and City of Erie will be put on the route as soon as they can get through without trouble, but they will not be sent out to buck ice.

The steamer City of Detroit came down from Detroit a year ago Tuesday. It will probably be late next week before she starts out this season.

HIGH LEVEL IN CHICAGO RIVER.

On Tuesday the Chicago river reached the highest water-mark in several years. Vesselmen felt hopeful that the general stage of the lake levels would at least be as satisfactory as it was last season. They say, however, that the test will not come until the ice leaves the straits of Mackinaw. There was little current in the river and tugmen had no difficulty in moving vessels. The vast fields of ice which held the steamers in their grip but a few days ago have disappeared from Chicago.

OBITUARY.

CAPT. THOS. WILSON.

Regrets are heard on all sides this week on the death of Capt. Thos. Wilson, Cleveland.

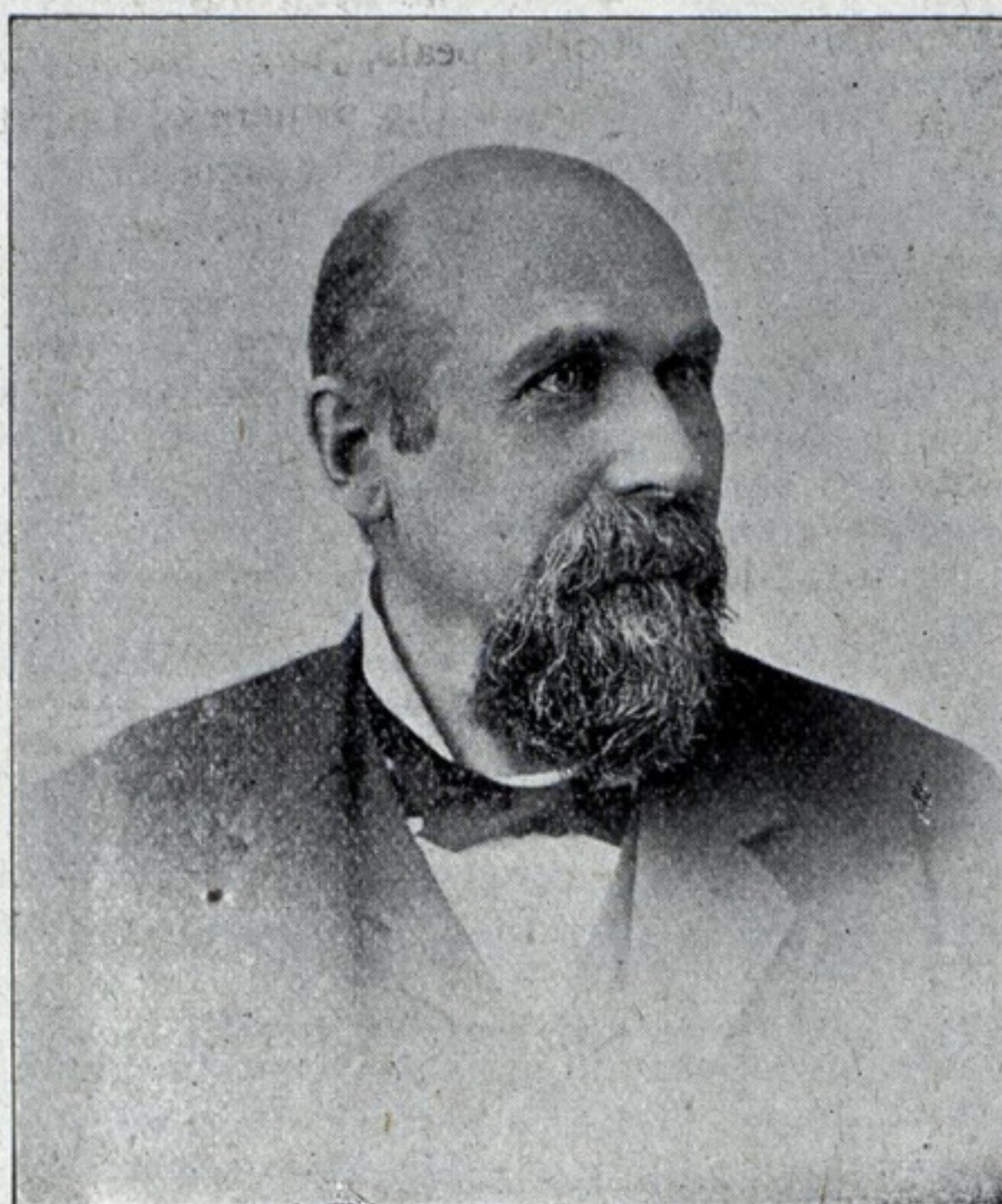
Several weeks ago the captain left with his family for an eastern voyage, and a very pleasant trip was experienced until a slight indication of pneumonia developed while at the historical city of Jerusalem, which, in a few days, showed fatal results, and Capt. Wilson breathed his last.

It is the most unpleasant duty which we have ever been called upon to fulfill, and to record, this week, the announcement of our friend's death.

Capt. Wilson was blessed with an abundance of this world's goods and he accordingly realized his responsibilities, no one man could have done more, with the resources at hand, than he did, and few accomplished as much.

Capt. Wilson was born in Fifeshire, Scotland, about the year 1836, and entered the coasting trade at an early age. He came to the lakes in 1855 and soon rose to prominence in the sailing community. Passing over the earlier portion of his career we find him in 1863 pilot and mate of the side-wheeler Illinois. In 1864 he was master of the passenger steamer Mineral Rock, and then for a period of eight years master of the passenger steamer Meteor on the route from Buffalo to Lake Superior.

About 1875 Capt. Wilson quit sailing and remained ashore to attend to and build up the Wilson Transit Line, now counted among one of the best fleet of boats on the lakes.



THE LATE CAPT. THOS. WILSON.

Previously to settling on shore, or in 1872, Capt. Wilson married Mary Morris, daughter of David Morris, who was the first shipper of coal out of Cleveland. Two of their offspring, Annabel and Mable, are now most estimable young ladies, the son, David, having died at the early age of fourteen years.

So is the formal record of events, and so ends the earthly career of one of the "whitest" men that ever lived. Strictly impartial, truly honest in all the best that the word can imply, especially charitably liberal, living to pursue the acme of man's ultimate mission on this earth. A kind son, father, husband, brother and friend. So passes away him who was lately among us, and, at least, hundreds will, and do, mourn his loss.

It seems a work of too many words at this time to mention the score of philanthropic works that Capt. Wilson had been, and was engaged in, when he was called hence, simply, we must regret his departure and look in vain for his equal, or some one to take his place in helping a fellow-man.

Suitable and fulsome recognition will be made of their great loss by the Lake Carriers' Association, when the body returns home for burial. The Floating Bethel, of which the late captain was president, as also hundreds of individuals, will offer the last sad tribute, but he has gone to that bourne from whence no traveler makes a return trip, and we must therefore bow to the inevitable, or, in other words, the Divine will.

Capt. Wilson was one of nature's noblemen, what more can be said? Only, that we condole with his family and bless the hand that chastises us through our daily walk in life.

FLOTSAM, JETSAM AND LAGAN.

For a cargo of wheat, Duluth to Buffalo, 3½ cents has been offered for the first trip of the season.

Out of the 150,000,000 bushels of grain taken to Buffalo last year by lake vessels only 21,000,000 bushels were sent on by canal.

New spars are being put in the barges Halsted, Middlesex, R. L. Fryer, Parana, schooner Belle Brown, and steamers J. H. Prentice, W. L. Frost and Mecosta at Chicago.

Joseph Miller, of Marine City, is negotiating for the purchase of the steamer T. D. Stimson from George Stortz, of Port Huron. The deal is about closed and the purchase price is said to be \$25,000.

W. W. Whitney, at present secretary of the tug trust at Duluth, will succeed R. J. Dunham as secretary of the tug trust at Chicago. Mr. Dunham resigned from the company to engage in other business.

An unusually large sand bar has formed at the entrance to Fairport harbor since the close of navigation and considerable dredging will be required to open up a channel. Work will be commenced as soon as the ice clears away.

Capt. Charles Thompson of Muskegon Mich., formerly master of the F. and P. M. steamer No. 2, and lately master of the Crosby steamer Naomi at Milwaukee, is believed to have gone to Cape Nome to dig for gold. It is alleged that he raised \$1,000 on a check supposed to have been issued by his employers, and that he borrowed several hundred dollars from his friends, and then disappeared.

Some time ago it was thought that the Lehigh Valley Transportation Co., Buffalo, would place with the lake ship-builders an order for three package-freight steamers of 5,000 to 6,000 tons capacity. Now it is said that the negotiations for three more steamers is off, but that the Union Dry Dock Co., Buffalo, very probably has an order for one more steamer, announcement of which will be made shortly.

J. Prindiville, Chicago, manager for owners, has made the following appointments: Steamer Jesse Spalding, James Travis, master; Fred Otto, chief engineer. Steamer Chas. Hebard, Geo. D. Ryan, master; Wm. Schumaker, chief engineer. Barge, Annabell Wilson, W. A. Edgar, master. Barge Aloah, Wm. McCarter, master. Steamer Niko, Thos. Beggs, master; Luke Manion, chief engineer. Barge Annie M. Peterson, Capt. Chas. Bough.

After twenty-seven years of sailing on her owners account under the American flag the schooner Madeline T. Dowling will end her days as a Canadian boat. She will be towed up and down the Canadian coast of the Great Lakes loaded with ties, tan bark, lumber and miscellaneous merchandise of the rougher sort. The boat was built in 1873, and was sold for \$2,500 cash Saturday by Capt. Frank B. Higgin for her owner Earnest Schubert, to William Allen of Walkerville, Ont.

Medals for heroic rescues from drowning during the last year will be presented this week by the Volunteer Life Saving Corps of New York Inland Waters. The names of the recipients will be enrolled on the State Scroll of Honor. In New York City medals will be presented at the Maritime Exchange to Capt. Michael F. Barry, William A. Lindsay and Geo. M. Purdy by President L. W. Beasley and Commodore P. A. Ferry. Brooklyn, Samuel F. Muns will receive one from Commodore Theodore Krombach, at Krombach's Yacht Hotel; Wm. Aspinall will be honored in a similar manner by Jas. R. Howe at the Register's Office, and the Rev. E. W. Kennedy will present a medal to Thos. F. Reynolds, at St. Mark's Church.

NOT A HERRESHOFF BUILD.

MARINE CITY, MICH, March 28th, 1900.

To the Editor of the Marine Record:

I notice in your issue of March 22d, 1900, on page 7, under head Chicago, special correspondent, an item in reference to the rebuild of the steamer May, at Benton Harbor by Graham & Morton Transportation Co.

The article is so much astray as regards her original lines, crediting the same to Herreshoff, that we have concluded to set your excellent paper right in the matter. The steamer Mary was designed and built in our shipyard here, and the Herreshoffs had nothing to do whatever with designing or building this steamer, they having no connection with the steamer Mary other than furnishing engines and boilers. Please make proper correction. Yours truly,

MORLEY & HILL.

About the only lumber charter from Lake Superior to be announced this spring is the steamer H. Luella Worthington and consorts J. W. Wilbor and A. T. Bliss to go to Toledo with a block of 10,000,000 feet. The price paid is reported to be \$3.50. S. R. Chamberlain, owner of the Worthington tow, has also contracted for a block of 19,000,000 feet to be moved from Lake Michigan and Georgian Bay ports to Chicago at \$1.96. The boats to move this have not been announced, but one of them will be the D. R. Martin. They will be started as soon as the ports are clear of ice. The Hines Lumber Company has added to its fleet by the charter of the steamer Fayette. Part of the Hines fleet has been engaged by eastern firms, and the company is after some outside tonnage. The steambarge Marshall F. Butters, Capt. Robert Reid, has been chartered by the Edward Hines Lumber Company for the season. The Butters will carry lumber from Menominee to Chicago a part of the season.

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BUFFALO, N. Y.

C. H. CRAMP ON SHIPBUILDING.

Charles H. Cramp, the well known Philadelphia shipbuilder, speaking about the relative cost of building ships in the United States and abroad, had the following to say on about the same lines of Senator Frye's statements in yesterday's Day in regard to the comparative cost of American and foreign shipbuilding:

"I endorse most emphatically the statements of Senator Frye. The cost of building merchant ships is from 15 to 25 per cent., higher in this country than it is in other countries and it will remain so as long as the present restricted demand for merchant ships continues in the United States.

"Our only hope of becoming a great maritime nation lies in the passage of such a bill as the one that has just been favorably reported in each branch of Congress.

"From a builder's point of view, I know such an enactment would be of the utmost possible permanent benefit to the nation, and would inaugurate our maritime resuscitation.

"There need be no fear that one line or class of ships will be unduly favored. The bill prevents that very thing. It gives the same chance to each, and there is no monopoly possible for any one.

"I believe that Senator Frye in his interview discussed the relative cost of American and foreign warship building. The general public may not be aware that the United States is the only nation that advertises for bids for the construction of its warships.

"All other countries allot the construction of their warships to such builders as they are satisfied will build just the vessel desired. The price is fixed by the government either at the opening of negotiations, or arrived at during them. The contracts are made without competition, and the system has always operated satisfactorily abroad.

"The newspaper editor whom Senator Frye was answering had suggested that orders had been given for warships in this country by foreign governments because we built ships of that class as cheaply here as elsewhere. But that was not the reason at all.

"The placing of such contracts, by governments in the countries that do not build all their own warships, is a matter of sentiment and confidence, very largely. Strong pressure was brought to bear on Russia to place all her outside orders in Germany and in France, where the great Russian loans had been secured.

"Finally orders were placed there largely because of that sentiment. But as to our firm, it so happened that the Russian admirals and her navy department officials were friends of ours and had had experience with our work. It was on this account that we were selected as the first firm to receive a contract outside of Russia for a modern battleship and a first-class cruiser for the Russian government, and this, too, upon our own designs, plans and specifications.

"The Russian government," concluded Mr. Cramp, "acts precisely as other European governments do in the matter of letting contracts for warships. It does as a private individual would, without advertising and without public bidding. It is the reputation of the builders that leads to direct negotiations."

In 1877 the Cramps rebuilt the engines in the second-class Russian cruiser Crayser, and 1879 the same firm altered three merchant vessels for the Russian government into war vessels and built for Russia one first-class cruiser, the Zabiaca.

LAKE SUPERIOR STAGE OF WATER.

(A CORRECTION.)

UNITED STATES ENGINEER OFFICE,
519 PROVIDENCE BUILDING,
DULUTH, MINN., March 21, 1900.

EDITOR MARINE RECORD.—I see by your issue of 8th instant, under heading "Stage of Lake Superior Levels", that the reporter has written the word higher instead of lower, by mistake. The closing sentence should read: "It would appear that with a normal amount of precipitation between now and the beginning of summer, the stage of water will be lower on Lake Superior this year than last." I added that with the condition mentioned (normal precipitation) the stage would probably yet be higher than the general average, on account of the exceptionally high water of last season.

J. H. DARLING.

COMPUTING SEAMEN'S WAGES.

TREASURY DEPARTMENT, BUREAU OF NAVIGATION,
WASHINGTON, D. C.

To the Shipping Commissioners of the United States:

To secure uniformity in the method of computing the amounts due seamen under agreements in shipping articles, U. S. Shipping Commissioners should observe the following rules:

1. The agreement will be considered as referring to calendar months, example: From February the 2d to March the 1st, both inclusive, is one month.

2. In computing the amounts due for a fraction of a month thirty days will be counted as a month, example: Five days are one-sixth of a month whether in February or March without regard to the length of the month.

3. Any single fraction of a day will be counted as a whole day, example: From March 1st to the forenoon of March the 4th, both inclusive, will be reckoned as four days.

4. If a seaman be engaged in the afternoon of one day and discharged in the forenoon of another day, the two fractions of days will be considered as one day only, example: The time from the afternoon of March the 1st to the afternoon of March the 4th, both inclusive, is three days.

T. B. SAUNDERS,
Acting Commissioner.

STEAMBOAT OFFICERS APPOINTED FOR THE SEASON OF 1900.

NORTH WEST TRANSPORTATION CO., Sarnia.—Str. Monarch, Capt. E. Robertson; Eng. Thos. Bard. United Empire, Capt. Jno. McNab; Eng. S. Brisbin.

GORDON CORNING, Saginaw, Mich.—Str. C. H. Green, Capt. C. E. Little; captain hires his engineer. Sch. Genoa, Capt. D. C. Ryan. Our Son, Capt. G. W. Ryan.

BIGELOW BROS., Chicago.—Str. Madagascar, Capt. John Jenks; Eng. Chas. Nerretur. S. M. Stephenson, Capt. Chas. Konert; Eng. —. Fanny Neil, Capt. John Kemming; Eng. —.

VULCAN TRANSPORTATION CO., Detroit.—Prop. Forest City, Capt. Joseph Sanders; Eng. Hugh Buchanan. R. J. Hackett, Capt. Thos. H. Sanders; Eng. James H. Foster. Schr. Wm. McGregor, Capt. Alexander Glen.

WESTERN TRANSIT LINE, Buffalo, N. Y.—Str. Arabia, Capt. H. L. Dennis. Boston, Capt. F. J. McCabe. Buffalo, Capt. Robert Murray. Chicago, Capt. John Davis. Commodore, Capt. Thomas Slattery. Hudson, Capt. A. J. McDonald. Mohawk, Capt. S. R. Jones. Montana, Capt. Harry Murphy. Milwaukee, Capt. M. Folan. Syracuse, Capt. John Fisher. Troy, Capt. Donald Gillies. Vanderbilt, Capt. F. D. Osborne.

RUTLAND TRANSIT CO., J. G. Westbrook, Gen. Supt., Ogdensburg, N. Y.—Str. Gov. Smith, Capt. W. S. Shay; Eng. John N. Phillips. F. H. Prince, Capt. D. A. Kiah; Eng. John Alexandire. H. R. James, Capt. Jas. Owens; Eng. Jas. Trumbull. W. A. Haskell, Capt. E. B. Shay; Eng. Morris Gore. W. J. Averell, Capt. Wm. Wait; Eng. H. M. Burton. Jas. R. Langdon, Capt. Harvey Brown; Eng. Jas. Chestnut. A. McVittie, Capt. H. Williams; Eng. D. G. Costello. W. L. Frost, Capt. T. Hough; Eng. L. O. Willix.

THE NORTHERN NAVIGATION CO. OF ONT., LIMITED, Chas. Cameron, Mgr., Collingwood, Ont.—Str. Majestic, Capt. P. M. Campbell; Eng. J. W. Aston. City of Collingwood, Capt. W. J. Bassett; Eng. C. Robertson. Germanic, Capt. R. D. Foote; Eng. Jos. Aston. City of Midland, Capt. F. X. La France; Eng. Wm. Whipps. Atlantic, Capt. Jas. Wilson; Eng. F. Cleland. City of Parry Sound, Capt. E. Walton; Eng. J. L. Smith. Brittanica, Capt. Chas. Jacques; Eng. S. Beatty. City of Toronto, Capt. Jno. O'Donnell; Eng. D. McQuade.

Lieut. Geim, commander of the Chicago hydrographic office, has issued a new chart to lake mariners of the harbor of Fort Wing, Wis., based on a recent survey made by the War Department engineers. This is comparatively a new harbor in the Lake Superior region, and is rapidly growing to a lumber port of importance.

NOTICE TO MARINERS.

LIGHT-HOUSE ESTABLISHMENT,
OFFICE OF THE LIGHT-HOUSE INSPECTOR, 11TH DIST.,
DETROIT, MICH., March 26, 1900.

On the opening of navigation additional spar buoys will be placed in the St. Mary's river as follows, viz.:

(1) One 25 ft. black spar buoy off the edge of a 16 ft. shoal, about 4,000 ft. ($\frac{5}{8}$ mile) S. $\frac{1}{8}$ W. from Round Island light-house.

(2) One 25 ft. red spar buoy off the edge of a 9 ft. shoal about 2,700 ft. (7-16 mile) East from Round Island light-house.

(3) These buoys will be moored in 20 feet of water on the in-channel side of the shoals referred to.

By order of the Light-House Board.

J. C. WILSON, Commander, U. S. N.,
Inspector 11th District.

UNITED STATES OF AMERICA—NORTHERN LAKES AND
RIVERS—MICHIGAN.

TREASURY DEPARTMENT,
OFFICE OF THE LIGHT-HOUSE BOARD,
WASHINGTON, D. C., March 23, 1900.
DETROIT RIVER.

Notice is hereby given that, on the opening of navigation 1900, the following changes will be made in aids to navigation in the Detroit river:

Ballard Reef Channel Gas Buoys (Nos. 1, 3, and 5), heretofore marking the westerly side of the channel, above Limekiln Crossing, will be painted red, re-numbered, respectively, 2, 4, and 6, and shifted to and established in corresponding positions on the easterly side of the Ballard Reef Channel. South Gas Buoy will then be about 5,000 feet ($\frac{1}{2}$ mile) N. $\frac{1}{4}$ W. from Limekiln Crossing Light Vessel (North), No. 65, and about 350 feet to the eastward of the Grosse Isle South Channel Range line, with which the line of buoys will be parallel, and the distance between two adjacent buoys will be, as heretofore, about 2,920 feet ($\frac{1}{2}$ mile). (L. H. B. Bulletin No. 104, pars. 53, 54, and 55.)

The easterly half of the channel is dredged to 21 feet depth, the westerly half to 18 feet, and the channel is 600 feet wide.

Ballard Reef Light Vessel, No. 63, will not be replaced on her former station, off the easterly end of Ballard Reef, making off from Grosse Isle, westerly side of the channel of the Detroit River, having been permanently discontinued.

ERIE HARBOR (PRESQU'ILE BAY) ENTRANCE.

Notice is hereby given that, on the opening of navigation, 1900, the following changes will be made in aids to navigation at the entrance from Lake Erie into Erie Harbor (Presqu'ile Bay):

Erie Harbor Outer Gas Buoy, No. 2, will be moored on the prolongation of the inner face of the outer part of the north pier, 1,250 feet ($\frac{1}{4}$ mile), to the eastward of its easterly end, and on the northerly side of the entrance to the channel into the harbor.

Presqu'ile Pierhead Light Station.—The fog bell at this station, on the north pier, will be sounded, from a square, white, pyramidal, wooden, open framework structure, with a small house in the middle section, recently erected on the north pier, about 30 feet from its outer end and about 470 feet from the light tower.

No change will be made in the characteristic of the bell. By order of the Light-House Board.

FRANCIS J. HIGGINSON,
Rear-Admiral, U. S. Navy, Chairman.

CAPT. PERSENS telephones from Thunder Bay Island to the Alpena Evening Echo that if Casper Alpern and David Lincoln want to get their fish tugs in operation soon they will have to put them on skates, as there is more ice around the island than any time previous this winter. The ice stretches out in the lake as far as the eye can see and is piled in huge windrows between the island and North Point, though why Capt. Persens should telephone to a private concern or parties we can't make out, Capt. Persens ought to send his official information through proper sources.

ICE REPORT OF THE LAKES, U. S. WEATHER BUREAU.

LAKE MARINE SERVICE,
DETROIT, MICH., March 27, 1900.

SUMMARY OF ICE CONDITIONS.

The reports indicate that the ice has decreased in amount over Western Superior and considerable open water is in view between Two Harbors and Duluth. From Keweenaw to Whitefish Point there are large fields of ice. The conditions are about the same in St. Mary's river, the ice ranges from 20 to 25 inches from the "Soo" to Detour. In Green Bay the conditions remain unchanged. In Lake Michigan the ice-fields which blocked the harbors on the east shore during the week, have, under the influence of easterly winds, moved off shore and the harbors north of Grand Haven are free. In the Straits the ice remains firm at 24 inches, but the snow has melted off during the week. The conditions remain about the same in Lake Huron; large ice-fields cover the northern portion and no water is in sight from the southern end; at Harbor Beach the ice belt extends out about two miles. The ice began to move out of the lower end of Lake St. Clair and there is now about one-half mile of open water, the ice beyond this ranges from 12 to 20 inches in thickness. Detroit river is open to below Sandwich Point. The ice over western Lake Erie is softening and there is open water off Huron; from Cleveland to Buffalo the lake appears to be covered with a field of ice, which is broken up over the western portion and solid at the east end. In Ontario the ice is confined mostly to the east end.

In comparison with the same period last year there is less ice, this week, in Superior and Michigan; about the same amount in Huron, although not so thick; and more in Lake Erie. The conditions at the Straits are about the same, although there is less ice to the eastward into Lake Huron. The usual details follow:

LAKE SUPERIOR.

Duluth—Harbor and lake ice becoming badly honeycombed and decreasing in thickness and area; outside ice about 14 inches thick. Open water some 10 miles out; northeast winds packing outside ice.

Two Harbors—Harbor ice 20 inches; open water outside breakwater.

Bayfield—Ice remains solid among the islands.

Washburn—Ice in bay 21 inches; weather not affecting ice yet.

Ashland—Ice in bay 28 inches; no change since last report.

Eagle Harbor—The ice in the lake extends as far as can be seen, with a few open spaces to the north and northeast.

Houghton—Ice 24 inches and solid.

Pequaming—No change; ice 24 inches.

Marquette—Harbor ice 13.5 inches; ice-field moving back and forth in the lake; considerable open water.

Grand Marais—Ice extends out as far as can be seen.

Whitefish Point—Ice in the bay 19 inches and solid; moving fields of ice above the point; continued low temperatures holding ice firm.

Sault Ste. Marie—Ice in river 25 inches; no change during the week.

LAKE MICHIGAN.

Manistique—No floating ice in harbor; snow melting steadily.

Gladstone—Ice in bay 29 inches and solid.

Escanaba—Ice 28 inches thick and softening somewhat.

Menominee—Ice in bay 18 to 20 inches and solid.

Green Bay—The ice in the river has softened considerably during the week and the bay ice is becoming black.

Sturgeon Bay—Ice about 24 inches; is honeycombing some.

The stations from Keweenaw south to Chicago report harbors clear and no ice in the lake.

Michigan—Large fields of shifting ice in the lake.

St. Joseph—Large fields of ice in the lake.

South Haven—Harbor ice very thin; ice fields in the lake extend out as far as can be seen.

Saugatuck—Easterly winds have moved the ice fields off the shore.

Holland—Easterly winds have moved ice pack from the shore in Lake Michigan.

Grand Haven—Entrance to harbor has been blocked with pack ice during the week; field so compact that steamers could not get through; easterly winds moving pack ice out into the lake.

Muskegon—Ice 10 inches thick, and softening.

Ludington—Ice blockade which prevailed during the week has been broken up by easterly winds; boats running on time.

Frankfort—No ice in harbor; very little ice in sight.

Glen Haven—No ice between Sleeping Bear and South Manitou; light drift ice extends north as far as can be seen.

Mackinaw City—Ice 24 inches and firm; snow about all off the ice.

LAKE HURON.

Mackinaw Island—No change in the ice in the Straits; no ice in sight in Lake Huron.

Detour—Ice 20 inches thick extends to Lighthouse Point.

Alpena—Thunder Bay ice about 8 inches; drift ice extends out as far as can be seen from Middle and Thunder Bay Islands.

Oscoda—Large fields of ice moving with wind; very little water in sight.

East Tawas—Ice remains solid; conditions unchanged.

Bay City—Ice firm; 10 inches thick.

Harbor Beach—Thawing weather has cut ice considerably in the harbor; floating ice in the lake extends out a mile or more.

Port Huron—No open water in sight in Lake Huron; ice about 14 inches thick; St. Clair river open for several miles below city.

LAKE ERIE.

Toledo—Ice was broken up in the river on the 22d and is now nearly all out; there is still ice in the bay but it is softening.

Put-in-Bay—Ice in the bay 10 inches and honeycombed; around the islands it is honeycombed and a good strong southwest or west wind will break it up.

Sandusky—Bay about half full of floating ice; navigation with Kelly's Island opened March 25.

Huron—No ice in harbor or in the lake; fishing tugs from here report no ice for 20 miles out.

Cleveland—No ice in harbor; moving fields in lake extend to the horizon and the windrowed ice has, in places, a thickness of 18 feet.

Ashtabula—No water in sight.

Jester—Ice extends out into the lake as far as can be seen. Shenango No. 1 left for Port Stanley on the 23rd.

Erie—Ice in harbor and lake continues solid and no indications of breaking up.

Buffalo—Ice extends out of sight; harbor ice 12 inches.

LAKE ONTARIO.

Sodus Point—Harbor ice 10 inches; large amount of field ice in the lake.

North Fair Haven—Harbor solid except small place near entrance; small fields of ice in the lake.

Oswego—Ice-fields have moved to the foot of lake; very little floating ice in sight at this port.

Big Sandy—Not much change since last report; ice is solid about the islands.

Cape Vincent—Ice 18 inches; no change since last report.

Fort Niagara—River still jammed with ice; no ice in lake.

Charlotte—No ice to be seen in the lake; small amount along the shore.

NORMAN B. CONGER,
Inspector and Marine Agent.

REPORTED BY THE LOOKOUT.

CAPT. JOHN FLAHERTY, of Erie, who is considered an expert on the ice conditions at the foot of Lake Erie, says the ice is much heavier than last year and that May 1 is about as early as navigators can look for a passage to Buffalo.

SAMPLES of ore taken from deposits in Greece, not far from the city of Athens, and also from some of the adjacent islands, are being exhibited in Great Britain. Greece is not only rich in iron ores, but tradition says that one of the earliest discoveries of iron in the world was made in that country, when the burning of the forests on Mount Ida caused the molten iron to flow down the mountain side to the astonishment of the natives.

ARTICLES of incorporation were filed by the St. Louis Steel Barge Co., in the office of Recorder of Deeds last Tuesday. The capital stock is \$110,000. The shares of stock are held as follows: Alex McDougall, 100; Henry S. Potter 300; D. R. Francis, 100; F. J. Wade, John Scullin, Isaac H. Lionberger, Howard Elliott, James Campbell and Rolla Wells, 110 each. It is the intention of the company to construct two large steel barges and a tow and have them in readiness for business in the transportation of grain and other produce. The barges will be built in St. Louis and the company hope to begin work on them by the 1st of April.

THE Oliver Iron Mining Company have begun an interesting and costly undertaking in diverting the course of the Iron river, in northern Michigan, so as to enable the company to operate with greater convenience upon veins of ore lying underneath the present bed of the stream. Employment is to be given to about 100 men for eight months in removing the earth from the new course mapped out for the river. This new bed will be several hundred yards from the old one. "There are no engineering difficulties worthy of special comment to be overcome in the work," said Dr. Nelson P. Hulst, general manager of the company, "and the change of the river trend is being made not because of any danger we apprehend from its present proximity to the mines. The river is now so near that its waters would get into the mine too rapidly. This will be overcome by moving the river bed several hundred yards. It will be diverted from two places where it now wends along the trend of certain ore formations. In one case it will be moved a length of half a mile near our Dober mine. This will be about a mile from the other. About 75,000 yards of earth, in total, will have to be removed in the two places, and the work will require in the neighborhood of eight months' time for completion. I judge that it will cost from \$50,000 to \$60,000.

A SYNDICATE has been organized by J. N. Huston, formerly Treasurer of the United States, to be called the New York and Newark Bay Ship Canal Co. Briefly, the plan is for the company to build a ship canal 200 ft. wide and 30 ft. deep at low water, through Bayonne, from the New York and Newark Bays. Including the docks, the New York Bay terminal will give a sheltered water front in New York Bay of four miles. The canal will be lined with slips and basins large enough to accommodate ocean steamers, and each pier will be covered with a warehouse or elevator. In the rear of the warehouses will be railroad tracks and sidings in each building. The neck of land separating the two bays is about a mile wide. A 200-ft channel will be dredged through Newark Bay and two miles of marsh beyond it. There will be another great terminal in Newark. In all the canal will be eight miles, giving in all sixteen miles of water front. The total capacity of the canal in docking room is about 300 large vessels. The plans also contemplate the construction of huge dry docks and a big shipbuilding plant in connection with the New York terminal and four cold storage plants, each with a capacity of 1,500,000 cu. ft. It is asserted that the completion of the undertaking will establish permanently New York's commercial supremacy. The estimated cost of the undertaking is \$50,000,000.

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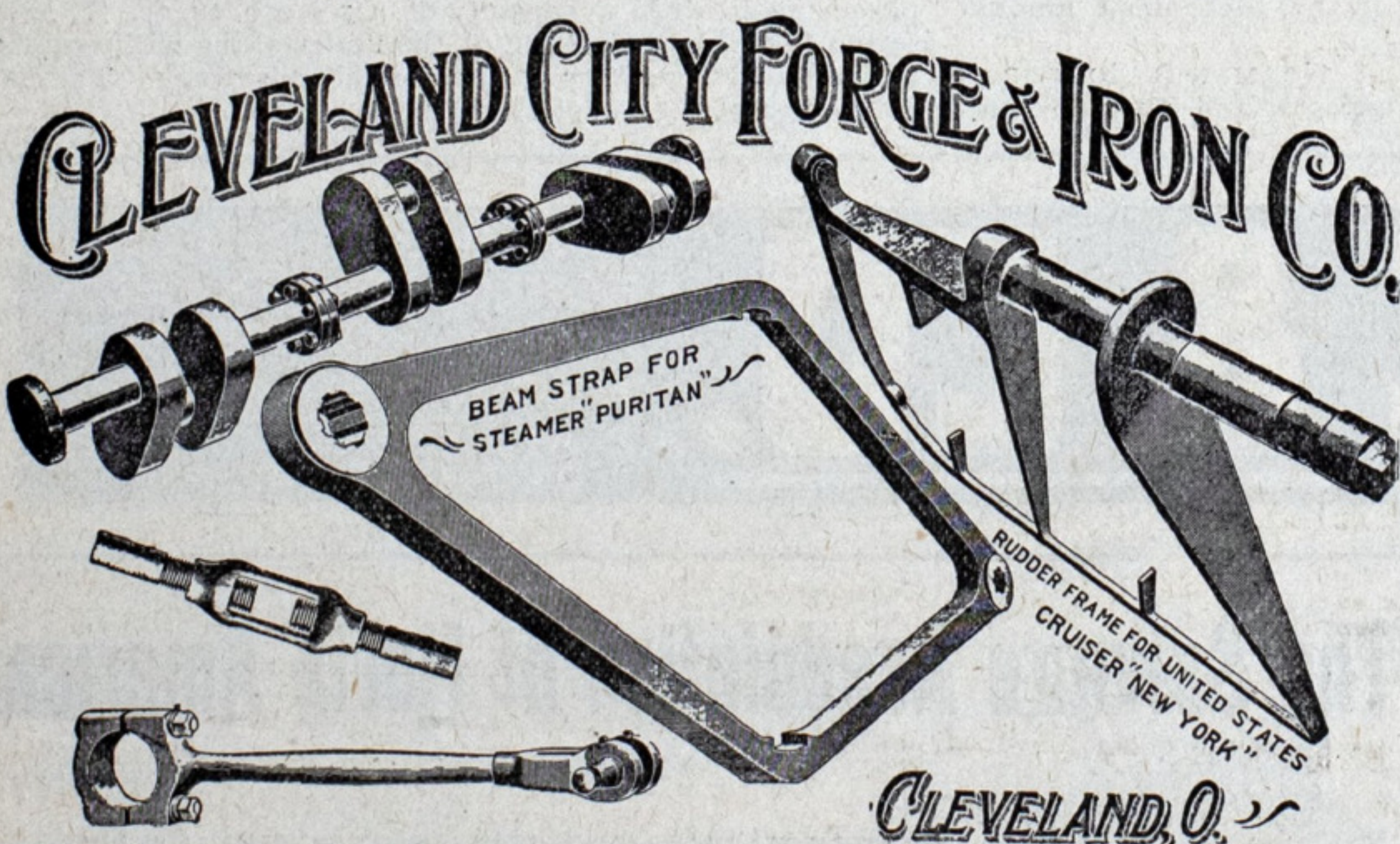
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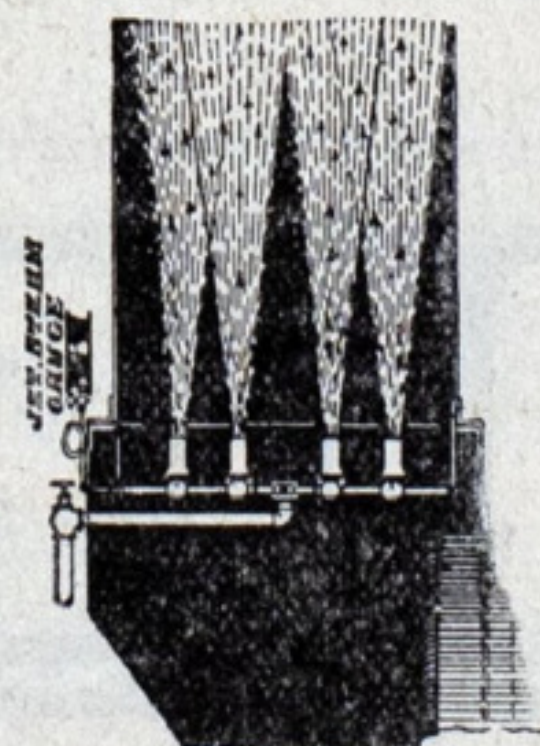
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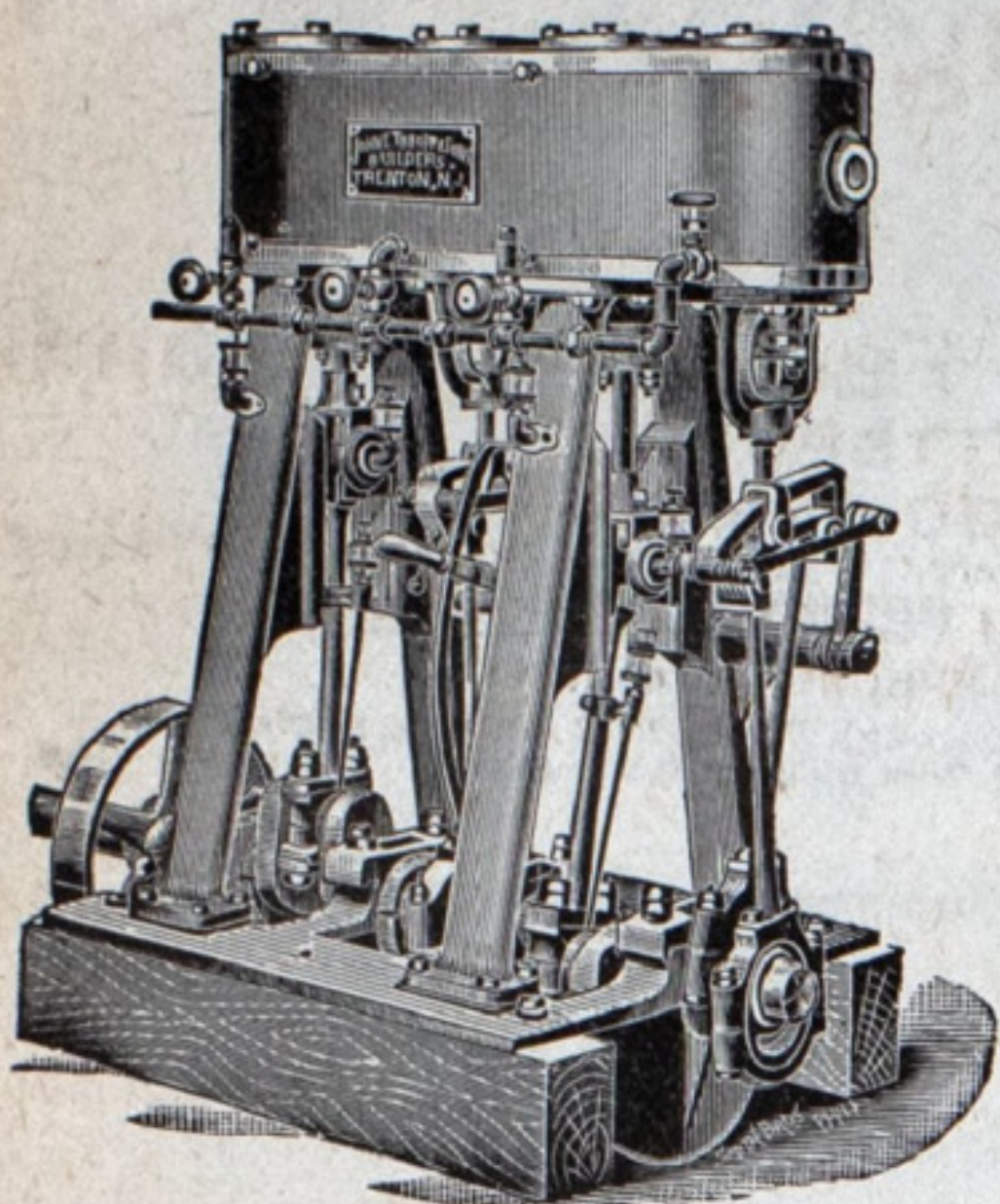
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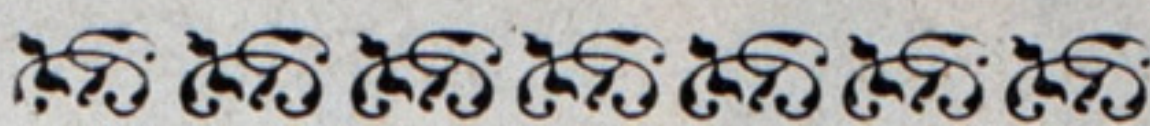


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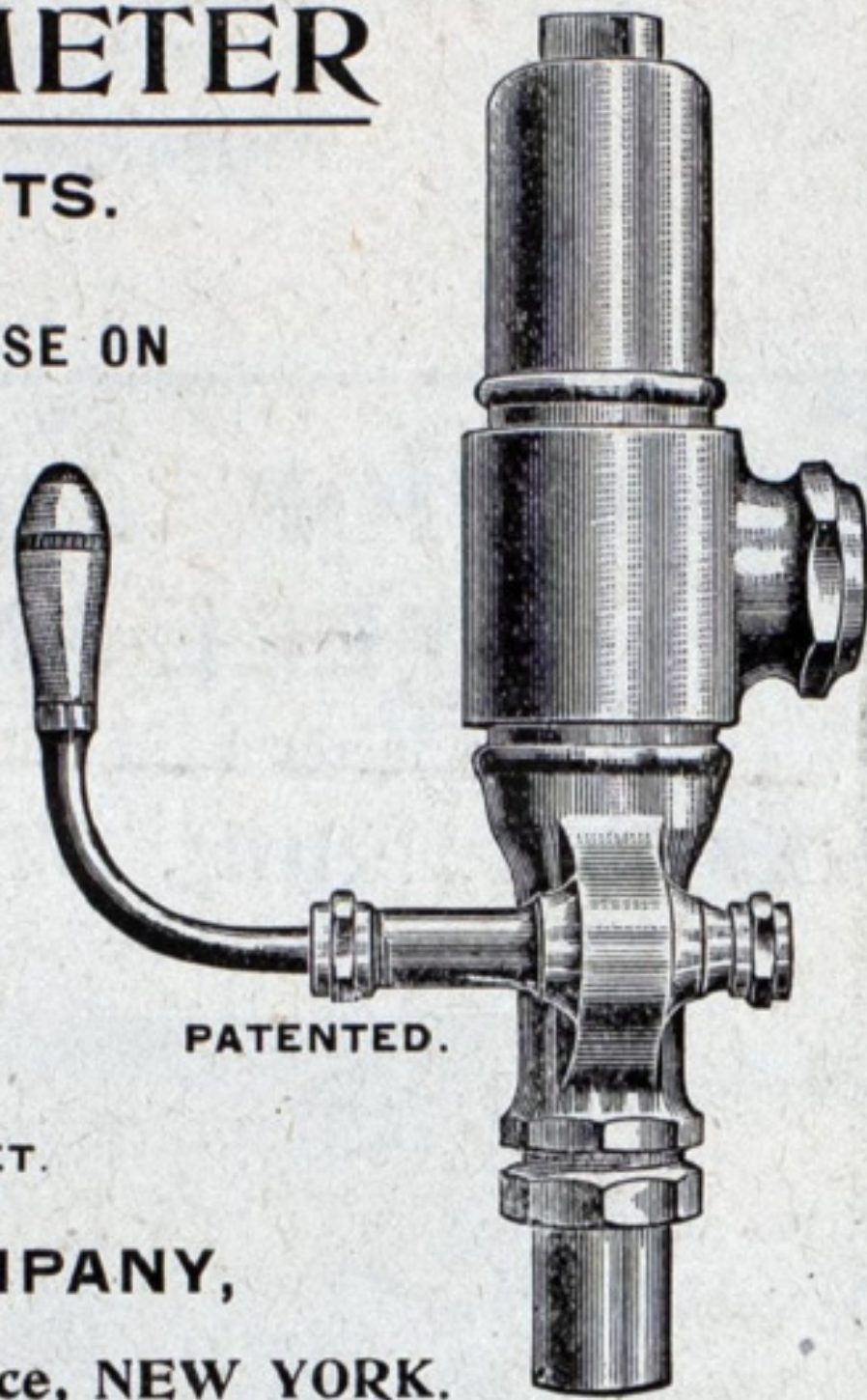
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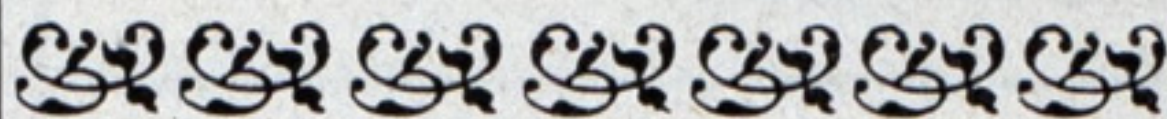
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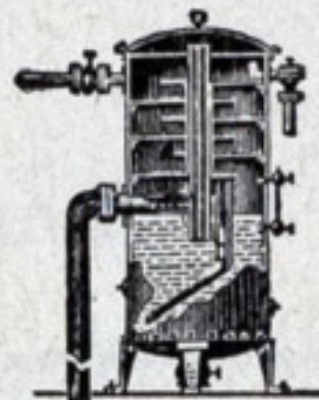
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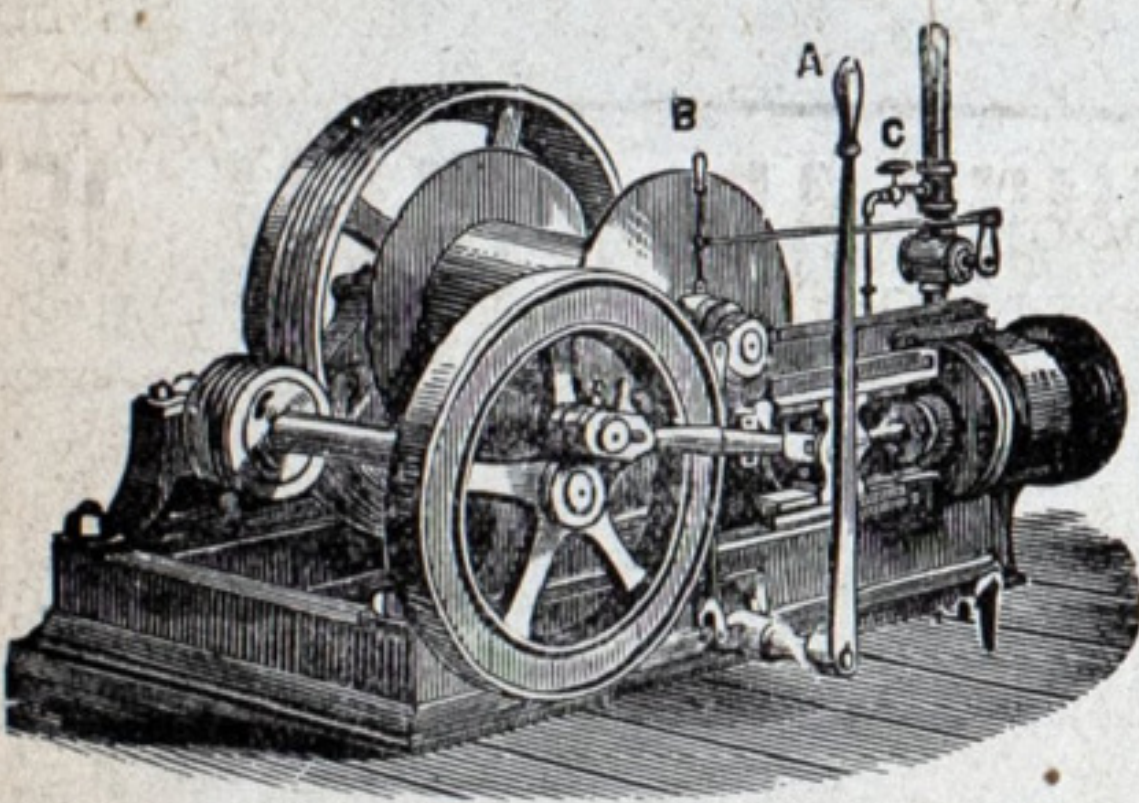
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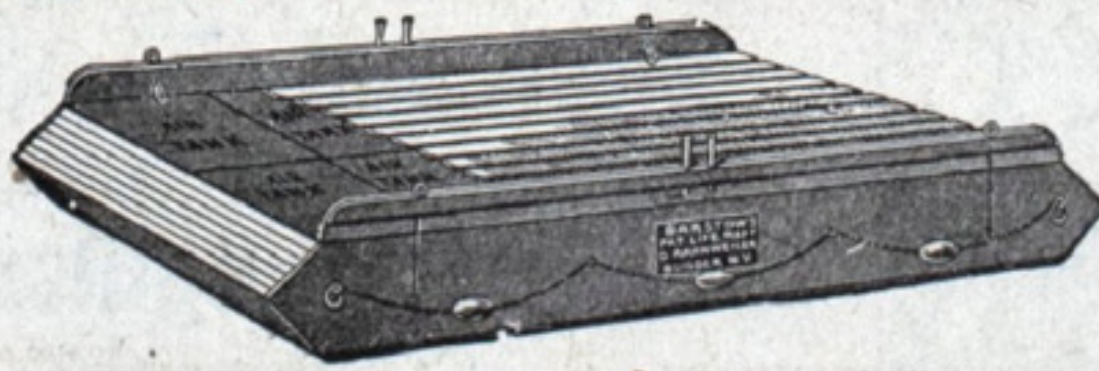
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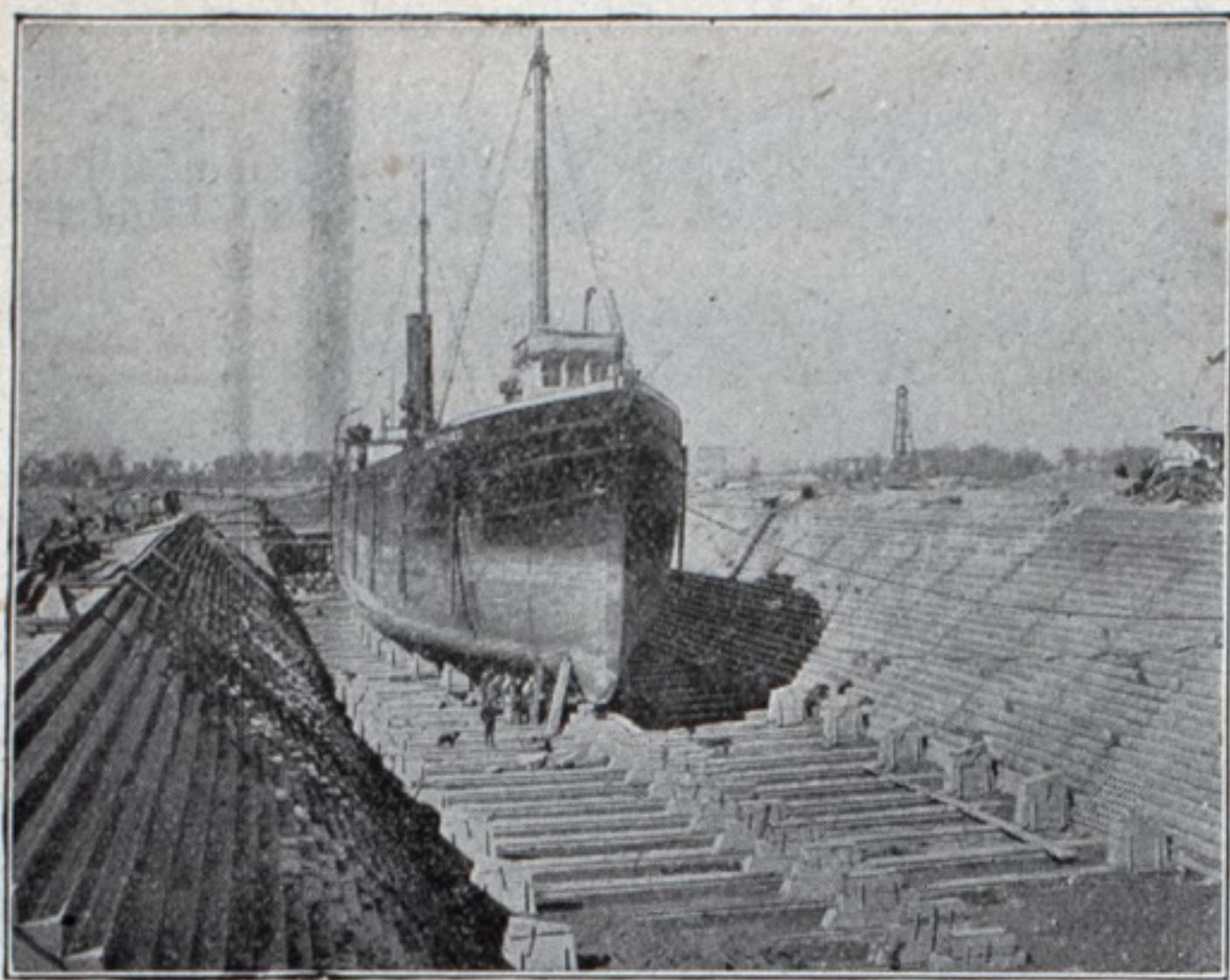


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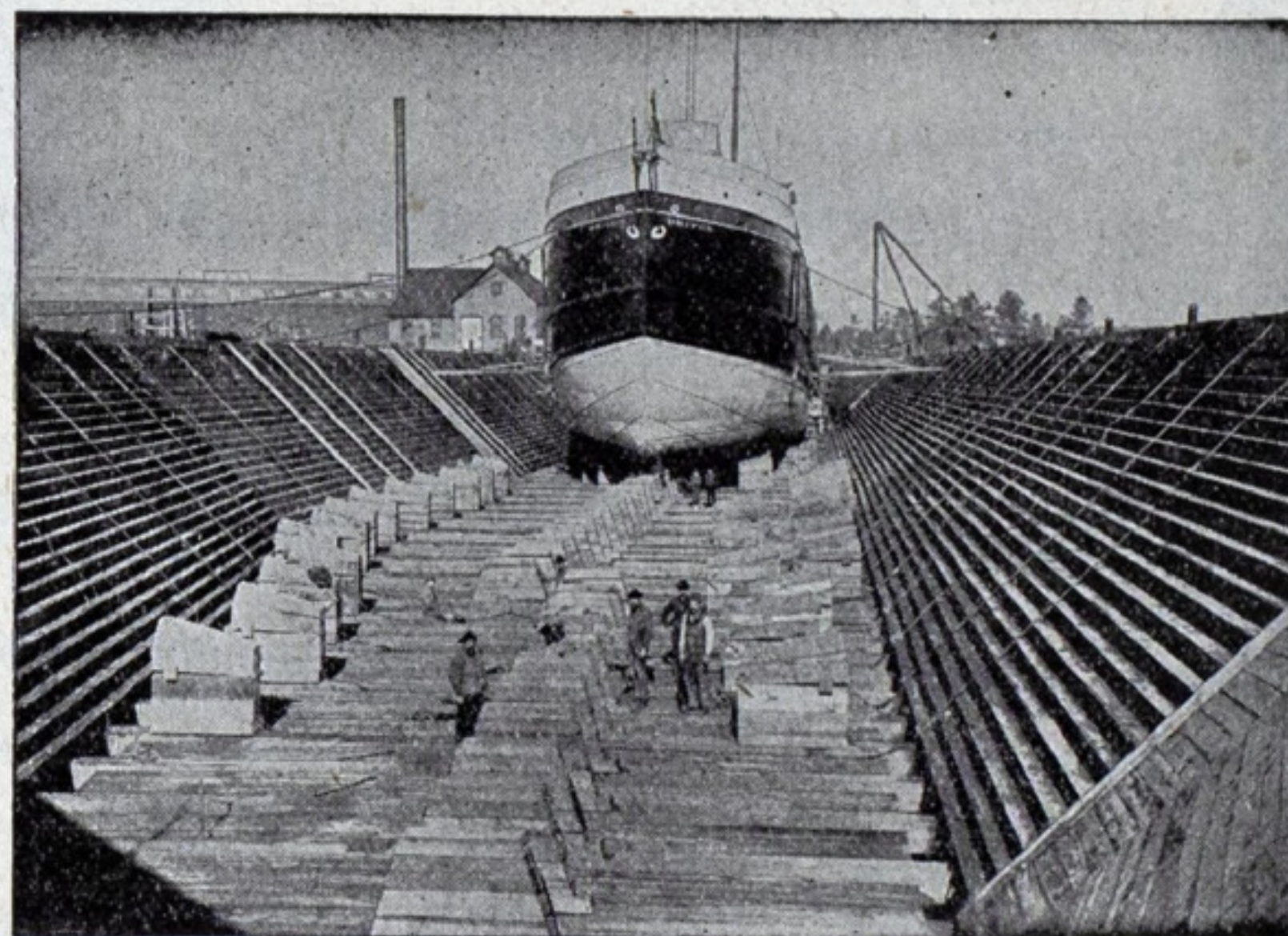
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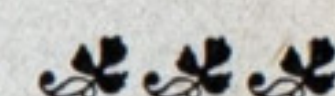
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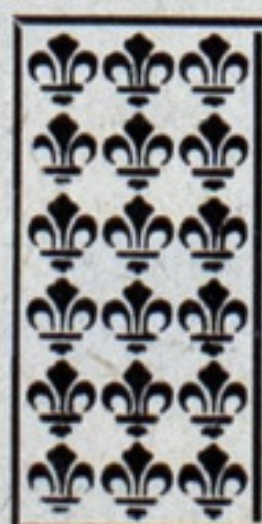
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